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The Ultimate DevOps Hiring Guide

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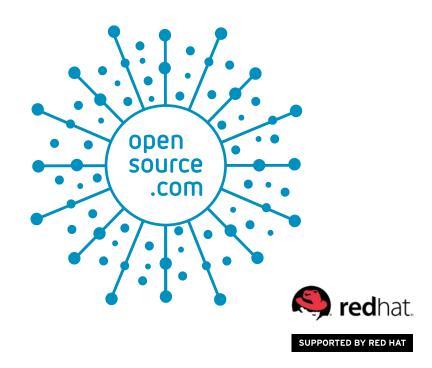
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FROM THE EDITORS

Dear hiring managers and job seekers,

The rush is on to build DevOps teams, in industries ranging from banking to manufacturing. Why? As Red Hat's Senior VP, engineering, Matt Hicks noted in an Enterprisers Project article earlier this year, "More companies are trying agile and DevOps for a clear reason: Businesses want more speed and more experiments – which lead to innovations and competitive advantage. DevOps helps you gain that speed."

Not all IT leaders like the term DevOps: Some prefer to just call it the agile way of working. But however you describe it, this style of working – which prizes speed, experimentation, and collaboration, all happening on nimble, cross-functional teams – has taken the enterprise by storm. It has demanded new IT leadership strategies. Above all, it has demanded culture change, as teams ditch old processes, rip down rules between groups, and accept "failures" as quick lessons on how to iterate their way to better products and services.

At times of great culture change, people will make or break your organization's efforts.

People on this new breed of team need to be strong communicators and collaborators. They need to be able to fall down and pick themselves up. They need to be curious enough to chase down the exact spot where a process is failing. They need to be flexible enough to listen to input from people across the enterprise. DevOps team stars have all of these qualities. As you can imagine, such people find themselves in great demand right now.

That's great news if you're a job hunter – and not such great news if you're a hiring manager. But even for the job hunters, DevOps poses tricky challenges. For one thing, it's still a relatively new skill set, so it's tough to show years of experience on your resume. Second, hiring managers are less interested in some traditional measures of qualification – think technical certifications – and more interested in your interpersonal skills, communication skills, and ability to adapt. Demonstrating these abilities on a resume or in an interview won't be easy. On the flip side, evaluating such factors demands hiring managers cook up new screening and interview techniques.

We've been writing a series of articles to help both DevOps job seekers and hiring managers navigate these changes and challenges. To that end, this guide brings together practical advice, analysis, and statistics on the state of the DevOps hiring market. In the guide's three main sections, we examine the culture issues as they relate to talent, the DevOps hiring landscape and trends, and best practices for DevOps job seekers and hiring managers.

This guide delivers peer-to-peer advice from IT leaders and DevOps practitioners, who know the challenges all too well, as well as insights from related experts such as recruiters. A true community of experts came together to share their knowledge.

I want to thank Jason Hibbets, Opensource.com senior community architect, the original editor on this project, as well as the following contributors, who shared their expertise for DevOps job seekers and hiring managers:

- John Allessio
- Kevin Casey
- Conor Delanbanque
- Catherine Louis
- Chris Short

Best regards,

Laurianne McLaughlin Content Director, The Enterprisers Project

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An overview of the DevOps hiring landscape

BY KEVIN CASEY

We examine the DevOps job boom—and share related advice for job seekers and hiring managers.

AS DEVOPS HAS BLOSSOMED in many IT shops, so has a particular IT talent war: With more companies adding new DevOps roles, hiring high-quality DevOps talent can be brutal. IT leaders don't just need to find warm bodies; they need to find people who know how to deliver on the promise of DevOps – constantly experimenting and iterating, at speed, while navigating tricky culture change [1]. That means good things for IT pros on the job market with the right mix of skills and experience. And this is not a fleeting situation.

Staffing firm Robert Half [2], in its 2018 salary guide for technology professionals, says it expects DevOps engineers to be one of the most in-demand roles among North American employers next year.

"There is an increased drive to capitalize on the agility and

productivity benefits brought on by DevOps, and leaders are seeking the talent to drive these initiatives and execute on delivering the strategy," says John Reed, senior executive director for Robert Half Technology.

We examined some key numbers that help tell the story of the DevOps jobs boom, and offer corresponding advice for IT pros. Let's

start with one hard-to-ignore reason more IT pros want to gain the experience and skills necessary to land a choice DevOps position: Money. \$104,508: Average salary for a DevOps engineer in the

U.S. That's according to recent data from jobs site Glass-door [3] (The national median salary for a DevOps engineer is \$110,000.) Of course, salaries vary by location: If you're plying your trade in the San Francisco area, for example, the salaries (and cost of living) jump higher; conversely, companies in smaller cities might be offering lower salaries. But suffice it to say that DevOps engineers tend to command top-notch IT pay across many locations.

60 percent of hiring managers are looking to fill DevOps engineer positions, according to the 2017 Open Source Jobs Report, a study conducted by The Linux Foundation [4] and tech jobs site Dice [5]. That ranks second only to the broad

category of "developers" (73 percent) as the most commonly sought-after roles in this year's report. (Systems Administrators come in third, at 53 percent.)

It's important to note that many companies hire "developers" for DevOps teams without ever calling them "DevOps engineers" – so these numbers may un-

derstate the DevOps hires. The term "DevOps engineer" is somewhat controversial: Some DevOps experts call it a mark of an immature DevOps shop, as we explore





DevOps is a relatively new role, therefore it's challenging to demonstrate experience.

later in this guide, How to tell a great DevOps shop from a mediocre one.

No matter the position title, one key trait the companies seek is the same: Flexibility.

"The flexibility of the [DevOps engineer] role and ability to be nimble is very attractive as em-

ployers look for tech pros who can understand the many sides of the tech organization," says Mike Durney, CEO of Dice [5]. "As companies find ways to be more efficient and competitive, DevOps professionals will increasingly be in demand."

42 percent of companies responding to the Open Source Jobs study want to add DevOps skills across their hiring portfolio, putting it in the top five sought-after skills, alongside open source cloud (47 percent), application development (44 percent), big data (43 percent), and security (42 percent) skills.

57 percent of companies seeking open source expertise are focused on DevOps skills, says the Open Source Jobs Report. That puts DevOps skills just behind application development (59 percent) and cloud/virtualization (60 percent) in the most-desired open source skills category.

DevOps engineer ranks #2 on Glassdoor's 50 Best Jobs in America rankings – as in second overall. Bear in mind, this isn't just a list of IT jobs. Glassdoor's rankings are based on salary, available jobs, and job satisfaction as reported by its users.

156,209 DevOps engineer jobs open on a typical day in September, 2017: This is the result we got in recent national Glassdoor jobs searches for "DevOps engineer." Our results include variants on the DevOps engineer title, such as "Systems Engineer / DevOps" and "Cloud Security DevOps Engineer."

Tweak that DevOps resume

With that many companies hiring for the DevOps function, getting the job you want should be a cinch, right? No.

"DevOps is a relatively new role, therefore it's challenging to demonstrate experience, given there aren't years and years of working in the function," says Durney, the Dice CEO.

"Professionals who are seeking roles in DevOps should be in the know with market demands and ensure that they have the skills to match open roles," says Reed from Robert Half Technology. "They should be revamping and customizing their resumes to reflect how their background complements the job they are pursuing."

Remember, you are trying to demonstrate problem-solving capability, ability to work at speed, collaboration and communication skills, and experience with culture change. Here's some potent advice that Robert Reeves [6], CTO at Datical [7] recently shared with us [8]: "DevOps is about identifying friction and resolving it."

Does your resume show you know how to experiment, spot trouble, and turn around failures?

Links

- [1] https://enterprisersproject.com/article/2017/8/7-habitshighly-effective-devops
- [2] https://www.roberthalf.com/home-page
- [3] https://www.glassdoor.com/index.htm
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Trends in titles and emerging specialties

BY KEVIN CASEY

DevOps experts weigh in on titles, emerging specialties, and team makeup. Take note, job seekers and hiring managers.

IF YOU'VE GOT DEVOPS CHOPS, you already know you're in demand [1]. And if you're an IT leader hiring for a DevOps shop, you know the challenges [2] in finding good people.

Like DevOps itself, the DevOps job market continues to evolve. And let's be honest: This isn't an area of consensus in IT, as the ongoing debate about titles such as "DevOps Engineer" [3] attests.

Given those debates, it can be tricky to figure out what's next in the booming DevOps jobs market, for both job seekers and hiring managers alike.

That doesn't mean we can't try. Let's dig into several key trends in – and ongoing debates about – DevOps roles moving forward.

1. The DevOps Engineer title: Debate rages

Perhaps the biggest trend in DevOps jobs is the ongoing discussion of whether "DevOps jobs" should exist at all. To be clear, DevOps jobs absolutely do exist, as evidenced by the thousands of well-paying "DevOps Engineer" positions (and similar titles) posted on sites like Glassdoor, Linkedln, and Indeed. However, not everyone thinks those titles should exist.

"The DevOps engineer title will continue being popular for as long as DevOps is popular," says says Viktor Farcic, senior consultant at CloudBees [4]. "The problem is that it is a complete misunderstanding of the principles behind DevOps. It forgets that the change is cultural, not technological."

It would be akin to, in an alternate history of IT, the proliferation of a title like "Agile engineer," which didn't actually happen.

"Agile processes like Scrum prescribed names for different roles, so no one came up with something like 'Agile engineer," Farcic says. "Since DevOps is less prescriptive, it produced more confusion about its nature and resulted in job titles such as DevOps engineer."

Robert Reeves, CTO at Datical [5], predicts that the future of software will put the title "DevOps engineer" – not DevOps itself – on the endangered species list.

"Today, almost all of us have a website, but no one has a webmaster anymore – they're obsolete. DevOps engineers are on a similar path," Reeves says. "Eventually, they will all become software engineers as we shift to a 'You Build It; You Run It' model of responsibility. DevOps isn't a service like payroll processing and it's not something you can outsource or assign one team to perform the entire role."

There's value in having a specific "DevOps team" in an organization's early iterations of DevOps, says Reeves, but it should be an evolutionary phase, not the finish line.

"Having DevOps teams today is important to identify best practices, but those need to be shared with the rest of the company so that all departments can benefit without creating a ticket for the DevOps team to complete," Reeves explains. "The DevOps team needs to help the rest of the company in eventually being able to manage and run the software they create."

2. DevOps titles will continue to vary widely

Here's both a mix of that debate – what does it mean to have a "DevOps job"? – and trend: You don't actually need to have DevOps in your job title to be working successfully in a DevOps environment.

"I am sure there are cases where it makes economic sense to individuals to include DevOps in their title – especially when job searches are underway," says Derek Weeks, VP and DevOps advocate at Sonatype [6]. "That said, I don't expect a mass shift into catch-all titles like 'DevOps Engineer.' There is still value for many enterprises in describing the specific responsibilities a team member brings to the table."

DevOps can describe a particular company's culture and software development lifecycle, and influence a particular individual's job responsibilities, no matter if the term is in that person's job title or not. It's a trend that's already evident. Weeks notes that of the more than 25,000 people registered for the All Day DevOps [7] conference on October 24, just 13% included "DevOps" in their title.

"While the term (DevOps) has been adopted, it is certainly not ubiquitous today," Weeks says.

Indeed, some CIOs prefer to use the term "agile" rather than DevOps to describe the same fast, experimental, cross-functional style of working.

"I am not a fan of DevOps being a title," says Mike Kail, co-founder and CTO at https://www.cybric.io/ [8], and former CIO at Yahoo. "It is a culture and a methodology that strives for continuous improvement and collaboration across teams and functional groups. Having said that, I believe there will always be a slight delineation between more Dev-centric and more Ops-centric engineers, so the area to continually improve upon is the real-time collaboration between them."

3. Expect more specialized positions and teams

"As initially conceived, DevOps was often perceived (and sometimes implemented) as being about the elimination of specialist roles," says Red Hat [9] technology evangelist Gordon Haff [10]. "Everyone does dev. Everyone does ops. Everyone carries a pager.

"But, especially in larger organizations, that's not really right," he explains. "Silos do have to be broken down. And it's hard to argue against multidisciplinary teams. But there's always going to be a need for specialists in areas like security and operating large-scale infrastructure. The key is for those specialists to effectively communicate with and provide tools for others to use."

Especially as DevOps teams mature, they develop roles and processes that more specifically address their organization's needs and business strategies, says Ben Newton, analytics lead at Sumo Logic [11].

"DevOps is a philosophy, a way of life, a perspective," he says. "I think the trend is for DevOps to just be a given for the modern organization, and the focus is then on figuring out what specializations are needed outside of the core developer/scrum teams that actually build and support their own code."

He expects roles like site reliability engineers (hold that thought for a moment), security architects and specialists, and various iterations of QA/Testing engineers to increase in DevOps environments.

"We are also seeing more data science-oriented engineers driving development, since analytics is so key to being competitive today," he adds.

"The primary trend is toward developers taking on more operational and business – and generally broadened – responsibilities, not operations or other older roles learning to code," Newton says.

Dan Juengst, principal technology evangelist at OutSystems [12], anticipates increased utilization of smaller teams brought together for specific projects, rather than a single larger unit that touches everything.

"Like a cross-functional scrum team in agile development, these DevOps teams will have resources with both Dev and Ops skills, and they will be empowered and enabled to work closely together with a focused goal of delivering a single project," he says.

4. Pay attention to the site reliability engineer role

The early leader for hot DevOps job that doesn't have DevOps in the title (see #2) and is likely to be increasingly specialized depending on an organization's needs (see #3): Site Reliability Engineer.

The nomenclature for this fast-growing role is attributed to Google, which describes site reliability engineering [13] as "what you get when you treat operations as if it's a software problem."

The title has quickly spread to other organizations: There's plenty of overlap with DevOps culture, especially when it comes to an obsessive focus on automation. Arvind Soni, VP of product at Netsil [14], predicts the SRE role will be one of hottest job titles in DevOps shops in the future.

"Considering the scale and complexity of modern applications, there is a need to address operational issues such as monitoring, deployment management, incident response, etc. with higher levels of automation and programming," Soni says. "This need is giving rise to the role of SREs, which bring in the software developer's mindset of 'let's solve this problem more comprehensively' rather than the previous mindset of 'let's get a tool or patchwork of scripts to get past this problem."

Links

- [1] https://enterprisersproject.com/article/2017/9/devopsjobs-6-eye-opening-statistics
- [2] https://enterprisersproject.com/article/2017/1/10-musthave-skills-needed-it-2017
- [3] https://enterprisersproject.com/article/2017/8/devopsjobs-how-spot-great-devops-shop
- [4] https://www.cloudbees.com/
- [5] https://www.datical.com/
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- [13] https://landing.google.com/sre/#sre
- [14] https://netsil.com/

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What you need to know about salaries

BY KEVIN CASEY

DevOps jobs are hot. Whether you're job hunting or hiring, use these statistics and tips to your advantage.

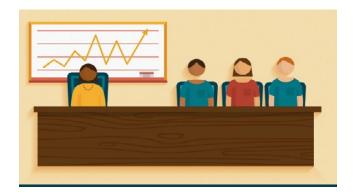
IF YOU'RE ON THE HUNT for a DevOps [1] job, don't expect your search to last long. With the right set of skills, you have employers competing for your services these days.

Even IT pros just beginning a transition into a DevOps-oriented job [2] from a more traditional role are set up for success in this market.

"The DevOps market is very strong," says Ryan Sutton, district president at staffing and recruiting firm Robert Half Technology [3], adding that the demand is a logical outcome of increasing cloud adoption among companies. "[DevOps-related hiring] has been very active as companies try to keep up with the technical trend and improve efficiency and collaboration across teams."

Even if you're in demand, though, it doesn't hurt to have some good data to help your case at the negotiating table. So, we rounded up nine noteworthy numbers on DevOps salaries and other trends that should help. And if you're hiring, these stats give you a sense of what you're up against in the marketplace.

\$133,378: The average salary [4] in the U.S. for people with a DevOps Engineer title, according to the jobs site Glassdoor [5]. Of course, such averages depend on the underlying data. In this case, the current average DevOps Engineer salary is based on compensation data submitted by 990 Glassdoor users with that title. Keep in mind that you'll find differing – but still lofty – numbers out there. Such as...



\$122,969: The average salary in the U.S. for people with a DevOps Engineer title, according to the jobs site Indeed [6]. Here's Indeed's basis: "Salary estimates are based on 76,204 salaries submitted anonymously to Indeed by Development Operations Engineer employees, users, and collected from past and present job advertisements on Indeed in the past 24 months."

DevOps salary information tends to fluctuate for business and technology reasons, too.

"DevOps is a constantly changing area in terms of compensation due to the rapidly changing skills requirements for different platforms and open source projects," says George McFerran, EVP of product and marketing at tech job site Dice [7]. While DevOps jobs are a trending search on Dice, the site's recently released 2018 salary report favors skill-specific compensation data, as well as other granular perspectives, such as regional differences.

The fundamental point: Arm yourself with current salary information, especially as it aligns with your specific skills. And make sure to localize it. Speaking of which...

\$120,000 - \$160,000: "The average base salary that we have seen in the Northeast is anywhere from \$120,000 [to] \$160,000, or sometimes higher," says Sutton of Robert Half Technology. Location is most definitely a factor in compensation. But right now, it appears that a DevOps job is lucrative almost regardless of location.

\$117,983: The average salary [8] in the U.S. for people with a Site Reliability Engineer [9] title, according to the jobs site Glassdoor [10]. While that number might be a tick lower than the ones above, it's a good point to remind ourselves that not all so-called DevOps jobs have "DevOps" in the title. In fact, there are those who don't think job titles such as "DevOps engineer" should exist in the first place.

Regardless of your stance, it's important to keep in mind that there are plenty of job titles – such as the increasingly popular SRE title – that might just as well be considered "DevOps jobs." Moreover, the terms DevOps itself might get retired as the culture, practices, and technologies it represents become the norm in IT.

"Frankly, the term is becoming less and less used as the confluence of software development and operations becomes the standard," says McFerran of Dice.

\$92,172: For comparison, this is the average salary in 2017 for all technology professionals in the U.S. So, yeah, that DevOps job hunt [11] might pay off.

63 percent: Among the IT pros included Dice's 2018 salary survey who said they were planning on changing jobs this year, 63 percent listed increased compensation as the reason why, making it the top factor. (Perhaps unsurprisingly, the average salary of job-changers who listed compensation as the reason was just under \$80,000, well below the national average.) "Better work conditions" (45 percent), which are sometimes correlated with DevOps, was the #2 reason.

74,834: For both job-seekers and hiring managers alike, here's another eye-opener: A recent worldwide jobs search [12] for "DevOps Engineer" on LinkedIn produced 74,834 open positions. That's actually more than the number of jobs that appear when simply searching "DevOps" (see below), because it includes engineering titles with a lot of DevOps-oriented responsibilities or skills that don't include the word "DevOps" in the title.

51,640: The number of open positions returned from a worldwide jobs search [13] for "DevOps" on LinkedIn

33,844: The number of job listings produced by a recent U.S. jobs search [14] for the term "DevOps" on Glassdoor.

DevOps jobs: Bonus advice for job hunters

Throwing out salary figures isn't what you're supposed to do to land the job; it's part of the process after you receive an offer. So, in the interest of getting that offer (or better still, multiple offers), make sure you're focused on the right skills. And don't think they're just technical.

"For professionals to succeed in DevOps [environments], they need strong communication and collaboration skills, as well as critical-thinking and problem-solving skills, to keep projects running smoothly," says Sutton of Robert Half Technology.

On the technology front, Sutton sees particular demand for the following skills and experience among employers looking for DevOps-oriented talent:

- Linux and other open source projects [15]
- Scripting (including languages such as Bash, Perl [16], and Python [17])
- Cloud [18]
- Configuration management and continuous integration
- Containers and orchestration [19]

"To best position yourself in the employment market, expand your open source knowledge, specifically Linux," Sutton advises. "From there, introduce yourself to other technologies and skills related to cloud, continuous integration and containerization."

Sutton shares good news for both IT pros looking to make a career transition and those worried that the pursuit of these skills might box in their future opportunities.

"The technology hiring sector has traditionally been very particular about making sure new hires have very specific experience, but now we are seeing that professionals aren't as pigeonholed as they used to be," Sutton explains. "If you can demonstrate strong DevOps experience, you can use it in a variety of environments."

Links

- [1] https://enterprisersproject.com/tags/devops
- [2] https://enterprisersproject.com/article/2017/9/devopsjobs-5-tips-transitioning-devops-jobs
- [3] https://www.roberthalf.com/
- [4] https://www.glassdoor.com/Salaries/devops-engineersalary-SRCH KOO,15.htm
- [5] https://www.glassdoor.com/index.htm
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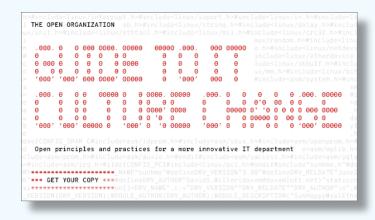
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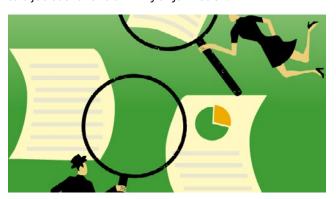
How to tell a great DevOps shop from a mediocre one

BY LAURIANNE MCLAUGHLIN

When interviewing, how do you tell a fantastic DevOps organization from a mediocre one? Use this advice.

HOW DO YOU SIZE UP A COMPANY DO-ING DEVOPS? For people seeking their next IT role, it's a crucial question. Whether you're already proving yourself a DevOps star or just breaking into DevOps, you don't want to sign on with an organization that's limping along – or worse, pretending to do DevOps. You also need to gauge how well the IT team delivers on results to the business. So you should go to interviews armed with smart questions and background on red flags.

DevOps methodology and culture [1] prizes speed, experimentation, and collaboration, all happening on cross-functional teams. Developing that kind of culture usually involves great change. When you're interviewing, it's important to uncover where the organization is in terms of progress with the process and culture change. "Knowing where the organization is on the DevOps journey is important to match up with what someone wants to do," says Red Hat's Matt Micene [2], who frequently writes and speaks on DevOps culture. "If you want a mature practice and the organization is just starting, this could cause overall angst to a job seeker and a hiring organization."



We gathered 10 pieces of expert advice on what to look for – and what to watch out for – in teams and leaders as you interview with and evaluate a DevOps-minded IT organization.

1. Is there a separate DevOps team?

Take stock of how the IT team is organized. Is there a special DevOps team and are some people called "DevOps engineers?" This is a divisive issue among DevOps experts. Some say it's wise to start the DevOps culture transition with a dedicated team; others call that approach hogwash and say you must spark the culture change across the



DevOps is a way of doing things across development and operations and is not one team's job.

whole organization. The separate team can be a clue to an immature DevOps shop, says Chris McFadden, Vice President of Engineering and Operations at email provider SparkPost [3].

"A great 'DevOps shop' will not have a separate DevOps team and no-one will have DevOps in their job title," McFadden says. "This is a mistake more mediocre organizations can make, usually after a company's management decides they need DevOps but do not really understand what that actually means. DevOps is a way of doing things across development and operations and is not one team's job." See our related article, DevOps lessons learned [4], for the opposite point of view and more background on this topic.

2. Discuss success metrics

What metrics should teams be using to measure results from DevOps work? Many teams start with metrics tied to improving speed – a core part of DevOps methodology. "A great



DevOps isn't just about going haphazardly faster, but delivering value quicker. DevOps organization knows exactly how long each part of the release process takes," says Robert Reeves [5], co-founder and CTO at Datical [6]. "They have numbers to detail their improvement. Also, they will have set goals for themselves: 'We decreased lead time from 12 days to 6 days. We want to get that down to 1 hour but our next

goal is 3 days.' That's a great DevOps organization and one you want to work for."

Additionally, some of the most meaningful metrics tie to business outcomes, says Red Hat technology evangelist Gordon Haff [7]. For example, a business goal may be to improve customer experience. In this case, a useful metric would be customer ticket volume, "a reasonable proxy for overall customer satisfaction, which, in turn, strongly affects higher-level (and highly valued) measures such as Net Promoter Score, the willingness of customers to recommend a company's products or services to others," as Haff noted in his article, DevOps metrics: Are you measuring what matters? [8]

As Micene sums it up: "DevOps isn't just about going haphazardly faster, but delivering value quicker. How they measure and manage that is key."

If none of the group's metrics are tied to business outcomes, that's a red flag.

3. Take a hard look at your potential immediate manager

Look for evidence that this is an agile leader who gets things done, says Jonathan Feldman, CIO of the city of Asheville, NC [9]. "Are there lots of little projects going on? Is the person talking about effective projects?"

You want to hear IT leaders talking about project success – rather than just code or process, Feldman says. It's one mark of an IT leader who is in tune with the business and delivering results.

The other place you see evidence that this manager gets things done? The hiring process, Feldman says. If the IT group takes a month to get back to people, it's not moving at agile speed. Feldman says people who interview with his IT team often get an offer within a day of the interview, but always within three to four days. (Take note, hiring managers: CIOs like Feldman are not willing to lose agile candidates to other organizations due to slow HR process.)

4. Look for automation

How does the IT team use automation in tasks such as provisioning and CI/CD? Forward-thinking Ops teams use automation to free up time to solve problems. Lack of automation may be another clue that the organization is early in its DevOps journey, or that the Dev and Ops teams aren't collaborating well.

Red Hat Chief Technology Strategist E.G. Nadhan [10] says, "A mediocre DevOps shop has tools sporadically applied to the business of IT." You won't see much automation in such a shop (and they're missing the culture piece.)

On the other hand, here's what Nadhan says you'll see in a great DevOps shop: Culture, process, people, and tools applied to the business of the enterprise.

5. Ask about how teams collaborate

"The best organizations are fully collaborative and have created processes that foster the continual and costing communications across teams and roles," says John Purrier [11], CTO of software company Automic.

Not all teams work the same, of course, and collaboration ideas are evolving. While DevOps started off with a focus on the handoff between developers and the Ops team, some companies have taken that idea further: "It's about enabling ops to provide an environment for developers, then get out of the way as much as possible," notes Haff in his recent article, DevOps success: A New team model emerges [12].

At the end of the day, you want to know the teams are in sync. "At a great 'DevOps shop' there is shared responsibility and accountability for the customer experience between



There is shared responsibility and accountability for the customer experience between the developers and the operations team.

the developers and the operations team. There are also shared goals for delivering value and ensuring reliability of the product," says SparkPost's McFadden.

6. Explore how IT trains up staff

The DevOps culture emphasizes constant experimentation and improvement. In that spirit, so too should DevOps practitioners strive for "continuous improvement and renewal professionally and personally," wrote Red Hat's Brian Gracely, director of OpenShift product strategy, in a recent blog, The 7 Habits of Highly Effective DevOps. [13]

You may think of training in terms of courses or certifications, but Gracely encourages DevOps leaders to think of training as a constant process. For example, IT leaders can incent employees to go learn new skills via side projects or meetups, and then frequently share the knowledge with the team.

"The proper way to address the need for 'skills improvement' is not to think about it as 'training' (e.g. attend a course, get a certification), but rather to incorporate it into an actual work activity," Gracely writes.

If the group you're interviewing with is doing this, that's a sign of a mature DevOps organization.

7. Ask what makes people stay

People who shine in DevOps environments have a powerful story to tell potential employers – and they're in demand. They don't have to stay put. Are people staying at the organization you're interviewing with for a good chunk of time, or is there a big turnover problem? IT leadership can be a key reason why people stay or go in a DevOps culture.

And it's not easy. DevOps requires IT leaders to rethink risk and other longtime IT principles. For example, take requirements: "IT leaders can no longer be passive recipients of business requirements, but instead must take responsibility for business outcomes," says Mark Schwartz [14], CIO of U.S. Citizenship and Immigration Services, in his recent article, DevOps requires dumping old IT leadership ideas [15].

8. Ask people about their first week on the job

"A great 'DevOps shop' will have new hires deploy changes to production within their first week," says McFadden. "This is a good sign that the team has ample continuous integration and deployment infrastructure in place and there is little drama in deploying to production. A more mediocre organization will be very protective of who can deploy changes to production, and possibly even have a separate team that handles deployments."

9. Search for potential mentors

Especially with DevOps, you want to join a team that has a cluster of expertise – a group of people from whom you have much to learn. "We're all the combination of our mentors," says Feldman. "They can't mentor you if they're not really good at it."

"Agile leaders are ambitious," he says. "They want to get stuff done. They want to solve problems. They don't want to write software that meets a spec but doesn't solve a problem."

10. Don't leave the interview without: A strategic vision

You should hear IT leaders, not just the CIO, articulate a strategic vision for where the business is going. They should be able to explain IT's role to play, in a realistic manner. "There's some kind of framework being used for how the work will be accomplished in a rapid, meaningful way," Feldman says. So listen to learn where the organization and IT team are headed.

And what should send you running for the door? Plans for big-bang, old school IT implementations that take years should ring your warning bell, Feldman says. That's not the mark of a DevOps shop. It's the opposite of speed and flexibility.

Links

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How to stand out and win a DevOps role

BY LAURIANNE MCLAUGHLIN

How can you stand out among DevOps jobs candidates? Apply this expert advice.

FOR IT JOB HUNTERS, some of today's most desirable jobs are DevOps [1] jobs. A company with a strong commitment to DevOps wants people to run fast, experiment, and iterate their way to success [2]. These organizations prize innovation. But the DevOps methodology and culture [3] turns some old rules about IT job hunting upside down.

For instance, your ability to spot trouble and turn around failures now trumps certifications, says Robert Reeves [4], CTO at Datical [5], a database release automation company. For DevOps teams, companies need people who can think on their feet – and communicate clearly to all kinds of people, from marketing team members to engineers. Remember, DevOps is all about cross-functional [6] teams.

As a DevOps job applicant, how can you demonstrate that you check all those boxes? Moreover, how can you stand out? Here, Reeves shares some practical advice



based on his experience in the trenches with DevOps teams. He also has some tips for people breaking into DevOps for the first time.

The Enterprisers Project (TEP): How has DevOps changed the way companies staff IT organizations?

Reeves: We have seen our customers at Datical look for gifted generalists instead of platform specialists. In the past, companies would hire an Oracle DBA or a Solaris Administrator. Those roles are changing dramatically just like "machine operators" in manufacturing. Previously, companies would hire a person to do a specific job over and over again, never deviating.

With the explosion of platforms and software used by today's enterprises, IT organizations need people that can quickly learn new technology and excel. Thus, the move to gifted generalists.

TEP: What are the most in-demand roles, the key ones companies need to fill in today's IT organizations practicing DevOps?

Reeves: Technology, with DevOps, is more about process management than technical expertise on a specific platform. It's not a specific role that's in-demand but the type of person. Companies need administrators than can code and coders that can administrate.

Just as developers are now expected to understand the platform they write code for, the same is true for administrators

BEST PRACTICES FOR PROSPECTIVE EMPLOYEES

who must be able to perform their job with code (Infrastructure as Code).

TEP: How can an applicant stand out during an interview process as a DevOps expert? What techniques do you use to identify standouts?

Reeves: Candidates should speak to their failures, what they learned, and how they turned it around. DevOps is about identifying friction and resolving it.

DevOps practitioners do not wait for someone to tell



DevOps is about identifying friction and resolving it.

them to do a specific task – the DevOps practitioner should identify challenges, a plan to address, and enact the plan. When complete, it's on to the next challenge and the process begins again. "Pain is instructional" and thus the

DevOps practitioner must appreciate failure and take it as an opportunity to improve.

TEP: How can applicants demonstrate their ability to work in a DevOps culture?

Reeves: Discuss past metrics and how you helped to improve them. Also, demonstrate how you helped "win hearts and minds." Soft skills are a must for the successful DevOps practitioner.

TEP: Any advice for IT pros looking to break into a DevOps shop for the first time?

Reeves: Odds are, you are doing DevOps today. Look at your recent past and find areas where you improved a release process. Detail how you identified the challenge, your proposed fix, and how you brought others to see the same thing you did. That is exactly what DevOps is.

This is very different than breaking into a role like Solaris Administrator where a certificate is all that's required to get that entry level position. You must show a track record. The good news is that you have already done this. If not, time to get started in your current job. These positions are in such demand that the barrier for entry is much lower than, say, a DBA or network engineer.

Links

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How to tailor your resume

BY KEVIN CASEY

For DevOps jobs, your classic IT resume and interview preparations need a rethink.

AS THE DEVOPS HIRING WARS heat up [1],

top-notch pros will have plenty of DevOps job opportunities. But if you expect to just cakewalk your way into a plum DevOps gig, especially if it's your first move into a "real" DevOps job, you're setting yourself up for frustration. Even the classic IT resume needs a rethink.

In fact, there's a rub with the growing demand for DevOps talent. As Mike Durney, CEO of tech jobs site Dice [2], recently told us [3]: "DevOps is a relatively new role; therefore, it's challenging to demonstrate experience, given there aren't years and years of working in the function." It's a techie version of the job-seeker's longstanding dilemma: It's hard to get the job without relevant experience, but you can't get relevant experience without the job.

The inspiring news: Most of the DevOps pros who've come before you underwent similar trials when blazing the path. Indeed, they had to start somewhere too, even when they had little formal "DevOps experience" on their resume.

"DevOps is a growing and changing area, and much of the top talent in the industry are self-taught through conferences, courses, and certifications," says John Reed, senior executive director for tech recruiting firm Robert Half Technology [4].

Landing that first "official" DevOps role is often about translating past experience into a relatively new position and building new skills – both technical and so-called "soft" skills – that align with DevOps objectives and methodologies. You'll also want to appropriately tailor your resume and other interviewing strategies for specific positions. We've gathered some expert advice on how to do both.

Smart job-seekers never send the same resume twice

This is good advice for anyone on the job market. It's an especially worthwhile starting point for IT pros looking to shift into DevOps from a more traditional role. You're not going to get very far sending out the same old resume time and time again. It's akin to throwing the proverbial spaghetti against the wall: It just makes a mess, and even if a few strands do stick, they probably won't be very appetizing.

"Resumes shouldn't be a 'one and done' project – if you're applying to multiple roles, you should also be sending resumes to reflect how your prior experiences have prepared you for each specific role," Reed says. He shares three examples of non-DevOps-specific skills and experience that might be desirable in a particular DevOps position.

- Technology expertise. Let's say you're well-versed in Python or Bash scripting. Well, you might want to underscore that when pursuing DevOps positions that place significant emphasis on automation. That extends to just about any application, language, or platform if the employer needs it and you know it, make that evident, even if your past job titles don't match perfectly with the role you're seeking.
- Management experience. If you're sizing up a DevOps manager position or similar role that involves managing people, you'll want to emphasize how you've successfully managed teams in the past.
- Industry-specific experience. If a particular hiring company wants someone with previous experience in their industry say, retail or healthcare highlight your prior roles and success stories in that sector.

Bottom line: Tailor your resume – don't lie, but customize appropriately based on your background – for the DevOps position you want.

"When a hiring manager scans a resume, they should be able to see the keywords, phrases, technologies, and tools that are specific to the role quickly and easily," Reed says.

2. Strategize how to translate traditional IT experience

This is the next big step beyond customizing resumes for specific roles. Think deeply about how your prior experience translates well into a DevOps position.

"[Sysadmins], for example, are highly sought after for DevOps roles – a candidate should emphasize their ability to build and administer [infrastructure] and discuss the overall success of those projects," Reed says.



That's not enough, of course. Reed advises asking yourself: "What are the other skills that are specific to the DevOps roles you're looking into that you can highlight and show your capability to take on those additional tasks? A sysadmin who is looking to make a transition into DevOps but who submits a resume specific to system administration will likely not make it to the top of a hiring manager's list. It's not that the skills aren't potentially transferrable or sought after by the organization, but your resume should be doing some of the work to explain why you'd be a valuable asset as a DevOps engineer, for example."

This is especially important. Because we hear so much about hiring wars and IT talent shortfalls, there's a tendency to picture packs of marauding recruiters warring over a resume laden with the right buzzwords. Don't be surprised to find out that you still need to sell yourself, especially early in a career pivot.

"Explain who you partnered with and the leadership involved in your projects," Reed says. "You'll also want to highlight your soft skills – the ability to work with and manage others – and your development skills."

3. Take on new projects and responsibilities

If you're planning to transition to a DevOps role in the future – or at least want to keep the door open – actively seek out opportunities in your current organization to work on relevant projects or take on new responsibilities.

"As organizations have made the move to adopt DevOps methodologies, they are looking for candidates who understand the benefits and can explain where they fit in with the strategy," Reed says. "Emphasizing cross-departmental relationships and collaboration will certainly be a plus, as will extensive experience with cloud migration and a good understanding of agile methodologies, development, and integration."

It's win-win advice: Even if you *don't* seek out a DevOps role in the future, those examples are all highly sought-after attributes in modern IT pros, especially in hybrid cloud [5] environments that might require extra doses of all the above.

4. Revisit your interview preparations for DevOps jobs

Tailoring a resume might involve, to some extent, ensuring you're speaking the keyword-based language of hiring managers and recruiters. But the interview process, by design, will separate the promising candidates from those who are merely stuffing their LinkedIn profiles with DevOps-y jargon.

Be able to tell a story about how your past experiences and skills have prepared to you to add value to a DevOps team.

"Perhaps your organization just moved to implement DevOps methodologies – explain the benefits and efficiencies that came as a result and how you were able to get involved in the process," Reed says. "Showing that you worked beyond your role in order to get involved with DevOps will demonstrate your desire to take initiative with your career and with new processes and projects."

Moreover, spend time thinking about and learning to communicate the value of DevOps. It's one of the more hyped IT trends of the last 5+ years; are you just chasing that hype, or can you connect the dots between DevOps and the big picture?

"A candidate who understands the 'why' of DevOps will be extremely appealing to a hiring manager," Reed says.

5. Sometimes, what you don't say is important, too

DevOps was born out of a need to move beyond old, siloed methods of working in IT that were no longer suitable in age of digital business. DevOps is about embracing change and enabling technology to drive the overall organization. And guess what? DevOps hiring managers aren't in hot pursuit of the "cranky-but-brilliant" engineer who pines for the good old days.

"Hiring managers do not want someone who is stringent in their old ways," Reed says. "An innovator is someone who is constantly looking for ways to improve processes, and good companies want innovative team members. Someone with an 'if it's not broken' mentality will not be attractive to a company with a growth mindset."

It's OK to wax nostalgic from time to time – but maybe save it for the next happy hour, and keep it out of the interview room.

This is another reason to double down on incrementally developing new skills, taking on new responsibilities or projects, and generally displaying a willingness and desire to try new things and embrace change. Silence on this topic speaks volumes – and not in a good way.

"A candidate who hasn't shown that they've taken steps to advance their career or skill set may be a red flag for hiring managers," Reed says.

Links

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Preparing for an interview

BY CATHERINE LOUIS

Want to build a positive, productive work environment? Focus on finding a mutual fit during the hiring process.

HIRING THE WRONG PERSON is expensive [1]. Recruiting, hiring, and onboarding a new employee can cost a company as much as \$240,000, according to Jörgen Sundberg, CEO of Link Humans. When you make the wrong hire:

- You lose what they know.
- You lose who they know.
- Your team could go into the storming [2] phase of group development.
- Your company risks disorganization.

When you lose an employee, you lose a piece of the fabric of the company. It's also worth mentioning the pain on the other end. The person hired into the wrong job may experience stress, feelings of overall dissatisfaction, and even health issues.

On the other hand, when you get it right, your new hire will:

- Enhance the existing culture, making your organization an even a better place to work. Studies show that a positive work culture helps drive long-term financial performance [3] and that if you work in a happy environment, you're more likely to do better in life.
- Love working with your organization. When people love what they do, they tend to do it well.

Hiring to fit or enhance your existing culture is essential in DevOps and agile teams. That means hiring someone who can encourage effective collaboration so that individual contributors from varying backgrounds, and teams with different goals and working styles, can work together productively. Your new hire should help teams collaborate to maximize their value while also increasing employee satisfaction and balancing conflicting organizational goals. He or she should be able to choose tools and workflows wisely to complement your organization. Culture is everything.

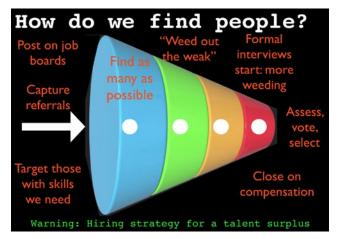
As a follow-up to our November 2017 post, 20 questions DevOps hiring managers should be prepared to answer [4], this article will focus on how to hire for the best mutual fit.

Why hiring goes wrong

The typical hiring strategy many companies use today is based on a talent surplus:

- Post on job boards.
- Focus on candidates with the skills they need.
- Find as many candidates as possible.
- Interview to weed out the weak.
- · Conduct formal interviews to do more weeding.

- Assess, vote, and select.
- · Close on compensation.



(Image credit: Catherine Louis)

Job boards were invented during the Great Depression when millions of people were out of work and there was a talent surplus. There is no talent surplus in today's job market, yet we're still using a hiring strategy that's based on one.



(Image credit: Creative Commons)

Hire for mutual fit: Use culture and emotions

The idea behind the talent surplus hiring strategy is to design jobs and then slot people into them.

Instead, do the opposite: Find talented people who will positively add to your business culture, then find the best fit

for them in a job they'll love. To do this, you must be open to creating jobs around their passions.

Who is looking for a job? According to a 2016 survey of more than 50,000 U.S. developers, 85.7% of respondents [5] were either not interested in new opportunities or were not actively looking for them. And of those who were looking, a whopping 28.3% of job discoveries [5] came from referrals by friends. If you're searching only for people who are looking for jobs, you're missing out on top talent.

Use your team to find and vet potential recruits. For example, if Diane is a developer on your team, chances are she has been coding for years [6] and has met fellow developers along the way who also love what they do. Wouldn't you think her chances of vetting potential recruits for skills, knowledge, and intelligence would be higher than having someone from HR find and vet potential recruits? And before asking Diane to share her knowledge of fellow recruits, inform her of the upcoming mission, explain your desire to hire a diverse team of passionate explorers, and describe some of the areas where help will be needed in the future.

What do employees want? A comprehensive study comparing the wants and needs of Millennials, GenX'ers, and Baby Boomers shows that within two percentage points, we all want the same things [7]:

- To make a positive impact on the organization
- To help solve social and/or environmental challenges
- To work with a diverse group of people

The interview challenge

The interview should be a two-way conversation for finding a mutual fit between the person hiring and the person interviewing. Focus your interview on CQ (Cultural Quotient [8]) and EQ (Emotional Quotient [9]): Will this person reinforce and add to your culture and love working with you? Can you help make them successful at their job?

For the hiring manager: Every interview is an opportunity to learn how your organization could become more irresistible to prospective team members, and every positive interview can be your best opportunity to finding talent, even if you don't hire that person. Everyone remembers being interviewed if it is a positive experience. Even if they don't get hired, they will talk about the experience with their friends, and you may get a referral as a result. There is a big upside to this: If you're not attracting this talent, you have the opportunity to learn the reason and fix it.

For the interviewee: Each interview experience is an opportunity to unlock your passions.

20 questions to help you unlock the passions of potential hires

- What are you passionate about?
- What makes you think, "I can't wait to get to work this morning!"

- · What is the most fun you've ever had?
- What is your favorite example of a problem you've solved, and how did you solve it?
- How do you feel about paired learning?
- What's at the top of your mind when you arrive at, and leave, the office?
- If you could have changed one thing in your previous/current job, what would it be?
- What are you excited to learn while working here?
- What do you aspire to in life, and how are you pursuing it?
- What do you want, or feel you need, to learn to achieve these aspirations?
- What values do you hold?
- · How do you live those values?
- What does balance mean in your life?
- What work interactions are you are most proud of? Why?
- What type of environment do you like to create?
- How do you like to be treated?
- What do you trust vs. verify?
- Tell me about a recent learning you had when working on a project.
- What else should we know about you?
- If you were hiring me, what guestions would you ask me?

Links

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Tips for transitioning to DevOps from other IT specialties

BY KEVIN CASEY

Recruiters and tech leaders share advice on how IT professionals can land a new gig in DevOps.

THE AVERAGE SALARY

for a DevOps engineer in the U.S. has hit \$104,508, according to Glassdoor [1]. And 60 percent of hiring managers are looking to fill DevOps engineer positions, according to the 2017 Open Source Jobs Report. When you see high salaries and high demand, it indicates an IT talent war.

No wonder IT professionals are asking themselves, "How can I transition into a DevOps role?"

To help you do just that, we rounded up tips from recruiting and tech leaders. Their perspective should be beneficial to IT leaders and hiring managers as well as job seekers.

How to transition into DevOps jobs

1. Ask to be placed on challenging projects

"Technologies are evolving constantly, and a formal edu-

cation isn't always possible given how rapidly skill sets need to shift to keep up with the market," says Mike Durney, CEO of job-hunting site Dice [2]. "DevOps pros who are currently employed should work with their boss to be placed on projects that can be resolved through the integration of operations and development.

"If there isn't an exist-

ing DevOps role within your company," Durney advises, "software developers should spend time sitting with the operations team [or vice versa] to understand how their

processes work and how they can be improved through collaboration."

2. Consider certifications and other training programs

"With the growing demand around DevOps, there are increased options for training and development programs and certifications – those looking to grow their career in the area should address any skills gaps through these programs," says John Reed, senior executive director for tech recruiting firm Robert Half Technology.

In the Open Source Jobs Report from Linux Foundation and Dice, three out of four open source pros said they feel that certifications are useful to their careers, and half of hiring managers reported they're more likely to hire someone with such professional credentials.

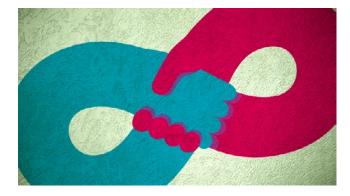
Better yet, you might be able to get your current employ-

er to foot the bill: 47 percent of companies represented in the report will pay for IT staff to seek certifications.

However, some DevOps experts caution that certifications – unlike the situation for hot IT roles of the past – will only get you so far with DevOps.

As a DevOps job candidate, your ability to spot trouble and turn around failures now

trumps certifications, says Robert Reeves [3], CTO at Datical [4], a database release automation company. Are you developing that kind of story to tell in the course of your current work?



3. Find a DevOps mentor

"It's also advisable for job seekers to seek out a mentor in the field and attend some of the growing number of seminars and conferences around DevOps to stay in the know about advancements in the industry," Reed says.

Reverse mentoring, which flips ideas about pairing people based on age, may be helpful for people looking to gain DevOps expertise. See Reverse mentoring: Is it right for IT? [5] and How to succeed with reverse mentoring: 7 tips [6] for ideas on rebooting traditional approaches to mentoring.

4. Build a tool that achieves new efficiencies

Automation is one of the most common goals of DevOps teams. If you can help your current team – even if it's not actually a DevOps environment – achieve a better, more efficient way to do a current process, especially if that process is now automated, that's DevOps resume gold, Durney says.

"[It] is important for DevOps pros to show how a tool they developed created efficiencies within a business. It's more than working on software and a lot to do with automation."

5. Work on open source projects and attend meetups

One significant opportunity to build that kind of skill set and portfolio: Contribute to open source projects.

"Professionals who are looking for a role at a new company can flex their skill set by working on open source projects and showing employers how they've solved a problem through creating a new tool," Durney says. "The beauty is a lot of open source projects can be accessed in your spare time online, so building up a resume or portfolio can be done with a fair amount of effort, but not necessarily over a long period of time."

Meetups, a staple of the open source community, offer you a chance to not only learn, but also network with DevOps experts – some with a lot of expertise. Why? DevOps pros in mature DevOps organizations think of training as a constant process, as Red Hat's Brian Gracely [7], director of

OpenShift product strategy, recently noted. (See DevOps Jobs: How to spot a great DevOps shop [8].) IT leaders can incent employees to go learn new skills via side projects or meetups, and then frequently share the knowledge with the team, Gracely says.

"The proper way to address the need for 'skills improvement' is not to think about it as 'training' (e.g., attend a course, get a certification), but rather to incorporate it into an actual work activity," Gracely writes.

If the group you're interviewing with is doing this, that's a sign of a mature DevOps organization. For more, see Gracely's article, The 7 Habits of Highly Effective DevOps. [9]

Links

- [1] https://www.glassdoor.com/index.htm
- [2] http://www.dice.com/
- [3] https://enterprisersproject.com/user/robert-reeves
- [4] http://www.datical.com/
- [5] https://enterprisersproject.com/article/2017/8/reversementoring-it-right-it
- [6] https://enterprisersproject.com/article/2017/8/howsucceed-reverse-mentoring-7-steps
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Adapted from "DevOps Jobs: 5 tips for making the transition" on The Enterprisers Project, published under a Creative Commons Attribution Share-Alike 4.0 International License at https://enterprisersproject.com/article/2017/9/devops-jobs-5-tips-transitioning-devops-jobs.

Section 3: Best practices for hiring managers

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Traits of a valuable team player

BY JOHN ALLESSIO

What do DevOps professionals value most in their teammates? Their answers can inform your hiring and talent retention tactics.

EVERY DEVOPS [1] project benefits from expe-

rienced DevOps team members. But what experience and skills matter most? To understand operations and development perspectives, I solicited input from our own internal DevOps team. They provided valuable insights. One interesting aspect is that the mastery of specific coding languages and tools was not emphasized.

Here's what distinguishes the team members that DevOps professionals prize. These traits can help CIOs and IT leaders fine-tune hiring and talent retention strategies:

1. Self-motivation

Is the job a paycheck or a passion? Do team members indicate an inherent interest in DevOps? What have they done to demonstrate a continued interest in learning about it? With all the hype about what the next big IT game-changer will be, team members must be aware of what other people are using, keeping an ear to the ground with open source communities (where innovation is happening), and experimenting with code firsthand. Also, attending trade shows

and events such as PyCon, DevOpsDays, Monitorama, and AnsibleFest are a few examples of how our DevOps team keeps up with current developments.

2. Flexibility

When it comes to DevOps, the days of narrow, specialized expertise are gone. Everyone on the DevOps team owns a bigger portion of the

IT estate and must wear more hats and accept additional responsibility, from coding to deployment. Each team member must be able to learn on the fly and be willing to

get their hands dirty learning new models and interacting with different systems.

3. Collaboration

Because the entire team must continually evolve with advancing technology, it is vitally important to ask questions, express opinions, and ask for help when needed. DevOps professionals frequently enter new technology territory, so in order to maintain forward progress, everyone must be comfortable admitting knowledge gaps, asking for help, and probing for information. "Teamwork makes the dream work" – and the team wins or loses as a whole.

4. Accountability

Every team member must deliver on personal commitments. Because each team member has more responsibility, everyone influences multiple areas of the IT ecosystem and can impact the entire mission if there is a breakdown or new challenge. Lack of follow-through not only affects current milestones, but also slows momentum as the team attempts to get back on track.



5. Balance

This is a tricky one. In action, an effective DevOps team maintains a well-orchestrated momentum, with each team member initiating and promoting collaboration while meeting individual goals and commitments. Inadvertent focus on consensus, rather than true collaboration [2],

can lead to design-by-committee issues and inhibit productivity, delivery, and creativity. Each team member must be able to self-evaluate and balance communication and execution. The end result is the "ebb and flow" of learning while you transform your IT environment.

6. Trust

An effective DevOps team always assumes positive intent [3]. The "blame game" has no place in retrospectives and root cause analysis. Placing blame and focusing on mistakes is the best way to shut down innovation and collaboration. Sooner or later everyone on the team will have a misstep. Viewing missteps as opportunities to learn and evolve, rather than as setbacks, further empowers the entire team.

7. Good old-fashioned smarts

Being an ace coder is not enough. Each team member must be able to assimilate new information, apply new understanding, know how to look for help, and have excellent judgment. Since DevOps focuses on enabling new solutions, it is unreasonable to expect DevOps teams to know or be familiar with everything from the start, including the latest deployment models, programming languages, and CI/CD systems. Hence, the importance of demonstrating solid grey matter and ability and desire to be a perpetual student.

Spotting DevOps MVPs

Admittedly, many of these characteristics are in alignment with good hiring practices, including self-motivated individuals

and good team players, but they're even more important for DevOps environments.

Given the importance of team dynamics in the DevOps way of working, involve your DevOps team in the hiring process [4] to ensure that they observe candidates up close. If a candidate demonstrates these qualities and can articulate why they are important, this is a good indication of their value in your DevOps organization.

Links

- [1] https://enterprisersproject.com/tags/devops
- [2] https://opensource.com/open-organization/17/11/whatis-collaboration
- [3] https://opensource.com/open-organization/17/2/ assuming-positive-intent
- [4] https://enterprisersproject.com/article/2017/8/devopsjobs-how-spot-great-devops-shop

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Tips to hire the right talent

BY CONOR DELANBANQUE

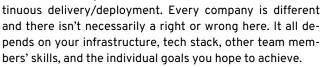
Here's how to hire top DevOps talent in a trending market.

AS MANY OF US in the DevOps scene know, most

companies are hiring, or at least trying to do so. The required skills and job descriptions can change entirely from company to company. As a broad overview, most teams are looking for a candidate from either an operations and infrastructure background or a software engineering and development background, combined with key skills relating to continuous integration, configuration management, continuous delivery/deployment, and cloud infrastructure. Currently in high

demand is knowledge of container orchestration.

In the ideal world, the two backgrounds would meet somewhere in the middle to form Dev and Ops, but most candidates lean toward one side or the other while maintaining sufficient skills to understand the needs and demands of their counterparts to work collaboratively and achieve the end goal of con-

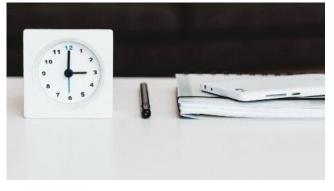


Focus your hiring

Now, given the various routes to becoming a DevOps practitioner, how do hiring managers focus their search and selection process to ensure that they're hitting the mark?

Decide on the background

Assess the strengths of your existing team. Do you already have some amazing software engineers but lack the infrastructure knowledge? Aim to close these gaps in skills. You may have been given the budget to hire for DevOps, but you don't need to spend weeks or months searching for the best software engineer who happens to use Docker and Kubernetes because they are the current hot trends in this space. Find the person who will provide the most value in your environment, and go from there.



Contractor or permanent employee?

Many hiring managers will automatically start searching for a full-time permanent employee when their needs may suggest that they have other options. Sometimes a contractor or a contract-hire is your best bet. If you're aiming to design, implement, and build a new DevOps environ-

ment, why not find a senior person who has done this a number of times already? Try hiring a senior contractor and bring on a junior full-time hire in parallel; that way, you'll be able to retain the external contractor knowledge by having them work alongside the junior hire. Contractors can be expensive, but the knowledge they bring can be invaluable, especially if the work can be completed over a shorter timeframe. Again, this is just another point of view and you might be best off with a full-time hire to grow the team.

CTRL-F is not the solution

Focus on their understanding of DevOps and CI/CD-related processes over specific tools. I believe the best approach is to find someone who understands the methodologies over the tools. Does your candidate understand the concept of continuous integration or the concept of continuous delivery? That's more important than asking whether your candidate uses Jenkins versus Bamboo versus TeamCity and so on. Try not to get caught up in the exact tool chain. Focus on the candidate's ability to solve problems. Are they obsessed with increasing efficiency, saving time, automating manual processes, and constantly searching for flaws in the system? They might be the person you were looking for, but you missed them because you didn't see the word "Puppet" on the resume.

Work closely with your internal talent acquisition team and/or an external recruiter

Be clear and precise with what you're looking for, and have an ongoing, open communication with recruiters. They can and will help you if used effectively. The job of these recruiters is to save you time by sourcing candidates while you're focusing on your day-to-day role. Work closely with them and deliver in the same way that you would expect them to deliver for you. If you say you will review a candidate by X time, do it. If they say they'll have a candidate in your inbox by Y time, make sure they do it, too.

Start by setting up an initial call to talk through your requirements, lay out a timeline in which you expect candidates by a specific time, and explain your process in terms of when you will interview, how many interview rounds, and how soon you will be able to make a final decision on whether to accept or reject candidates. If you can get this relationship working well, you'll save lots of time. And make sure your internal teams are focused on supporting your process, not blocking it.

\$\$\$

Decide how much you want to pay. It's not all about the money, but you can waste a lot of your time and others' if you don't lock down the ballpark salary or hourly rate that you can afford. If your budget doesn't stretch as far as your competitors', you need to consider what else can help sell the opportunity. Flexible working hours and remote working options are great ways to do this. Most companies have snacks, beer, and cool offices nowadays, so focus on the real value, such as the innovative work your team is doing and how awesome your game-changing product might be.

Drop the ego

You may have an amazing company and/or product, but you also have some hot competition. Everyone is hiring in this space, and candidates have a lot of the buying power. It is no longer as simple as saying, "We are hiring" and the awesome candidates come flowing in. You need to sell your opportunities. Maintaining a reputation as a great place to work is also important. A poor hiring process, such as interviewing without giving feedback, can contribute to bad rumors being spread across the industry. It takes only a few minutes to leave a sour review on Glassdoor.

A smooth process is a successful one

"Let's get every single person in the company to do a onehour interview with the new DevOps person we are hiring!"

No, let's not do that. Two or three stages should be sufficient. You have managers and directors for a reason. Trust your instinct and use your experience to make decisions on who will fit into your organization. Some of the most successful companies do one phone screen followed by an in-person meeting. During the in-person interview, spend a morning or afternoon allowing the candidate to meet the relevant leaders and senior members of their direct team, then take them for lunch, dinner, or drinks where you can see how they are on a social level. If you can't have a simple conversation with them, then you probably won't enjoy working with them. If the thumbs are up, make the hire and don't wait around. A good candidate will usually have numerous offers on the table at the same time.

If all goes well, you should be inviting your shiny new employee or contractor into the office in the next few weeks, and hopefully many more throughout the year.

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Questions hiring managers should be prepared to answer

BY CATHERINE LOUIS

Fostering a diverse, inclusive work environment is more important than ever—especially for DevOps teams, where candidates often call the shots. Here's how one situation went wrong, and some questions to keep your hiring on track.

MAKING ANY TEAM MORE IN-

doesn't happen by default. You need to be intentional about it. Inclusivity is especially important if you're building a DevOps team responsible for increasing communication and collaboration across the board to ensure quality for internal or external customers.

I witnessed this first-hand during a recent interaction involving my daughter, who was being recruited to join a new development team. I was at my daughter's house in Berlin, sitting at her kitchen counter sipping an awesome glass of Chardonnay and watching her make pasta. Besides being an excellent cook, she's a techie, a pretty awesome data wrangler, and a freelancer in high demand.

Her phone rang. (Actually, I think it barked.) She looked at the number and said, "Sorry, I've gotta take this-it's about a gig."



I settled in and listened to her side of the conversation. Here's how it went:

"Tell me, in your own words please, if/when this product is released, how is the world going to be a better place?"

So, 17 guys. Any

women on the team?

Any from out of the

Good girl-she's asking if they have a vision!

She looked at me and frowned.

"Do we have access to the customer?"

Her frown deepened.

"Tell me about the team-do they get together for lunches or dinners?"

She held her hand over the phone and whispered at me, "17 guys, no women on the

country?

team. They don't socialize with their boss.

"So, 17 guys. Any women on the team? Any from out of the country?"

She held her hand over the phone again: "He's talking about Agnes the cleaning lady now!"

"Agnes? Let me replay this just to make sure I got it: You have one cleaning lady on the team who comes in mornings, lunch, and evenings to pick up after the guys?"

She looked at me and did that thing where she crosses her eyes, then whisper-screamed, "I'd be the second woman, after the cleaning lady, on this team!

"OK. Tell me about the benefits."

She looked at me, held the phone away, and whispered, "Free all-you-can-drink craft beer. Quick, what's that per month in dollars?"

I jotted numbers on a napkin: somewhere between 3-8 beers a day, let's just say 5 beers a day, at \$6 a beer ... I whispered back, "\$600 a month."

"Would it be possible, instead of craft beer, to be comped an additional \$600/month? I don't drink beer. Hmm ... OK. No, I'm not interested in free running shoes every two months, either, unless this can be comped. Hmm ... no. OK."

She looked at me and crossed her eyes again.

"How is code deployed?"

She made a question face.

"OK ... hmmm ... may I see the CI console?"

Good girl, trust and verify. If the team doesn't know the URL or have it easily bookmarked, they aren't paying attention to it and don't care about getting better.

She frowned.

"When do you do your deploys?"

She whisper-screamed, "ONCE A MONTH, ON FRIDAY NIGHT!"

"No thanks—sorry, gotta go. I am really not interested in this position at all."

After she got off the call, I held up my glass, clinked it with hers, and we drank to her having cleverly weeded out a bad opportunity.

Long story short: If you want an inclusive organization, you must work for it. Be prepared to tackle the questions my daughter asked, and more. She's not alone: Her savvy engineering friends are learning quickly how to spot the potentially toxic organizations. Developing an inclusive, top-talent team means you can answer questions like the ones she asked – and provide the answers recruits want to hear.

Don't do what this guy did (or didn't do): He did not ask her why she wasn't interested. If he had, he might have learned what needs to change to attract top candidates like her. The tables have turned these days: Instead of the boss interviewing for the best employee, employees are interviewing for the best potential opportunity.

Everyone remembers being interviewed. Potential recruits will certainly share both good and bad interview experiences, and word will get out quickly whether your organization is one to pursue or to avoid, so start your journey now.

I've included a list of questions below that candidates might find helpful to determine which organizations value diversity and inclusiveness. If any of these questions help during your interviews, let me know – I would love to hear your stories!

Questions candidates might ask

- Tell me, in your own words, how this product/service makes the world a better place.
- Tell me what life is like working here.
- Describe a typical day for the person in this position.
- What values does your organization hold, and how do you live those values?
- Personalize a few questions for values—for example, what does a "sustainable pace" mean at this company?
- If you could change one thing about the job/team/organization, what would it be?
- What would "setting someone up for success" mean for this job/team/organization?
- How large is the team? What is the background/experience of team members?
- How many team members have been here for more than 3 years?
- What is the onboarding procedure for this position—first day, week, month? What support do you offer?
- Does the team get together for lunch or dinner? (Do they have enough of a relationship to enjoy socializing with one another outside of work?)
- How and why are teams formed and reformed? (This question can offer insights into PMO organizations.)
- Do employees have access to the customer?
- Tell me about the relationships employees have with stakeholders, suppliers, and partners.
- Is adaptive development supported? Is shared learning used and encouraged?
- What are the biggest challenges?
- When and how is code deployed?
- What current tools do you use? May I see the CI console?
- What safe-to-fail systems are in place to help us learn? Is failure tolerated?
- What are some of the things you wish you were doing?
 How long will you remain in this position? (Don't accept a job with a boss who is about to leave.)

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DevOps hiring strategies to attract top talent

BY CHRIS SHORT

Tips from this DevOps recruiter can help you find, cultivate, and recruit great talent.

IDON'T OFTEN TALK TO RECRUIT-ERS. As a matter of

fact, I don't typically work with third-party recruiters because all too often, they are interested only in filling a job reg, collecting their commission, and moving on to the next one. Additionally, most recruiters don't really understand the needs of a DevOps-minded organization. But good recruiters are often the best source of knowledge when it comes to finding great talent.

When I sat down to write a piece about DevOps hiring, I knew that candidates' and hiring managers' thoughts would be well covered by the Opensource.com DevOps community. But I thought it'd be great to get some tips from a recruiter on how to find, cultivate, and, well, recruit great talent for DevOps roles.

Enter Ken M. Middleton [1] of Your DevOps Recruiter [2]. Last year Ken reached out to me about potentially working together during my job search, and I quickly recognized his honesty and candor. Ken knew what I was looking for was outside of his wheelhouse and told me that. He earned my respect at that moment.

I sat down with Ken and peppered him with hiring questions. Following are some highlights from our discussion.

I started with a very direct question: How do you find great talent?

Ken provided two interesting answers. "The first one you can probably guess: LinkedIn. LinkedInto anyone recruiting a specialized skill set-is the bee's knees when it comes to really being able to tap into that passive talent. That's the thing that I think LinkedIn has created for themselves. You have people on LinkedIn who, they're not really looking for a job, but they're open to hearing about jobs. And I'm able to connect with them. I think people really have to understand that LinkedIn is a two-way street."

Ken added, "So this is something that I try to do a decent job of, and I'm consistently working on it. You are looking at the best talent out there, based on their LinkedIn profile and how strong it is and what that brand is that they've created. But you also have to have a pretty strong brand yourself. So my LinkedIn profile, to me, is part of my marketing platform, that when I reach out to somebody, I want them to understand that I'm in the DevOps community-I'm commenting on DevOps things; I'm looking at different DevOps articles."

Ken takes the continuous learning and feedback tenets of DevOps seriously.

Ken's second answer should not surprise anyone familiar

with Opensource.com, but it might shock some folks in the DevOps world: "You've got to be active in your local area, whether it's with meetup groups, whether there are other, different DevOps or AWS groups, or any other contact or class forums. You've really got to see what's out there and get out and meet people."



Imagine that! Collaboration outside of silos works in hiring DevOps. This is such an overlooked method of hiring.

You don't need to have a position to fill to better yourself and meet like-minded people. I try to encourage introverted people I work with to go to more meetups and community events. You don't necessarily need to speak at these events. You don't even have to ask questions. But at least go and introduce yourself to someone. Eventually, you'll find somebody with a similar interest, and you can discuss things with them. Building relationships like this will net you benefits beyond hiring.

Filling the unfilled DevOps roles

One thing I learned while talking to Ken was that many DevOps roles go unfilled.

"I've been in the IT recruiting space for 11 years, but when I left my previous company and ventured out on my own in March of 2017, I started looking at all these DevOps roles, and what I recognized is that a lot of the roles weren't being filled. Some of these roles had been open for close to a year. And I didn't understand the problem."

Ken continued, "I started doing some research, and what I found out is that you have your general recruiters trying to recruit on these roles, and they didn't clearly understand the difference between Git and GitHub. They didn't know what continuous integration means versus continuous deployment. So, when they were speaking to these people, they were using all these general terms and slinging people at these jobs that were not qualified for. And it was just wasting everybody's time. You really need someone that knows the lingo if you're going to engage a recruiter to help you in your search."

Take the time to collaborate with recruiters, too. Spreading knowledge outside of the technical teams in an organization can take it even further.

When I asked Ken if he uses the Silicon Valley method of hiring—looking at a candidate's GitHub profile—he responded that he rarely does this. "I'll go and look at some people's profiles, but I don't look at their code because I don't know what the hell I'm looking at. But what I do is try to make sure I understand is all the different technologies and how they're using them."

Recruiting from GitHub is a bad idea, Ken says. "It's quite exclusionary [3]. [GitHub] has helped me build my knowledge overall. But I don't look at GitHub. I do try to continuously figure out where I can find new people if it is different avenues like that. I'm always looking for different avenues to find people."

Learning new technologies

Continuous learning goes a long way even outside of highly technical fields.

I wanted to press Ken on a problem I routinely have when recruiting people: How do you know if a candidate can learn new technology? How do you assess if they have fully invested and walled themselves off from new things?

Ken replied, "What I have noticed a little bit with some of the managers I've worked with is that they're so focused on a specific technology that they're willing to pass up on good talent in regard to people who could pick up the technology."

It's nice to know that checking boxes on a list is not the best way to go about assessing whether or not to hire people.

Ken continued, "What I've found [is] if they're making their first DevOps hire, they're so focused on the technology—and as you know, there are so many different tools out there that when you look at the combination of what people can work with, it's almost endless. So when they're so focused on, hey, this person has to have experience with this configuration management tool, this monitoring tool, this container tool—and it's like—okay, they may need to have that. But let's talk about what you are trying to accomplish. What could they potentially learn? And what is that cultural aspect that you're looking for? I've found that when you get managers who are so specific on the technology that it's so hard to fill their roles, that it just makes it almost impossible."

Hiring for culture fit

A few times during our conversation, the topic of culture and finding a cultural fit [4] came up. Ken's answer has forever changed how I will interview:

"I always like to ask people, 'Tell me, what is your ideal-type role? If you could have the druthers of what you'd be doing and what type of environment you're working in, talk to me about that.' And so, when I'm working with people, I try not to lead with a job. I might tell you, 'Hey, I have a job that you need this XYZ technology,' but I won't tell you what the culture is like. I won't tell you what the company is like. I won't tell you anything in regard to what the company is looking for, because I want to hear what you're looking for. And if you're saying something that's in line with what I'm looking for-I have some people who are like, 'I want to work for a startup company-I like a hectic environment; I like learning new things all the time, and I love it when they don't have processes in place.' Okay, that sounds like a company I'm working with. But if you tell me—and I get this too—'I want an established company; I don't want to have to worry about having a job in two years from now or 18 months when our crowdfund didn't come through'-I listen. I let them tell me what they want. That gives me a sense of what type of culture they're looking for."

Brilliant! The approach shouldn't be to sell a person on a job, but to find the best fit for your culture and needs. A hard sell will typically get a person to buy in. But if a candidate has to be sold into your company, do you think they'll be around after a year or two?

Make sure a role fits the candidate's needs and wants, then tell them more about it.

What secrets lie in reference checks

I asked Ken: How can you validate your assessment of a candidate's talent?

Ken had an interesting answer to that question: "You've got to check their references. You've got to call people that they've worked with and talk to them about what type of employee this person was. I love my consultants, and I think they're amazing, and I'll always advocate for them, but I never take someone's consultant's word. I just can't do it. I'm here to service two people: I'm here to serve the client and I'm here to serve you. And me putting you in a job that you're not really qualified for, or you're not a culture fit for, it's not helping you or me."

How do you gauge if someone's fit for a specific position based on their references?

"I check their references, and I know in my mind what the client's looking for, but I don't lead the reference in that capacity. I will ask a question like, 'Hey, tell me about John. Tell me about what type of worker he was. Walk me through what you can expect from him on a day-to-day basis. What would be the soft skills he had? What would be his weaknesses? How does he handle them?' I'm listening to all of those things, and then once I get a good sense of if they are a match, I'll even ask—and most of the time this works out: 'Here's the type of environment this person might be going into. They're looking for X, Y, and Z, this, that, and the other. What are your thoughts on that person's ability to do the job?'"

And I've had people—you can tell the ones that are like, absolutely, that person would be great for it—or when they start giving you qualifiers, like, 'He or she would be good if they do this,' or 'Here is what I think that you need to make sure the person understands.' That helps me kind of create a picture if this person is an overall good fit. But it is a long, thorough process because it does take time. And it's not a complete science; it's a little bit of an art."

How do you gauge the quality of a reference? How can you verify if a candidate sent a buddy as opposed to a manager?

"I use LinkedIn to verify references. I don't take friends, I don't take coworkers; I take managers. And when people give me people that they say are their managers and I can't verify that through LinkedIn, that's a little bit of a red flag, too. And I rarely even present those candidates, because they're giving me peers and saying they're managers. Luckily, with LinkedIn, you can kind of filter a lot of that stuff out these days."

Establishing rapport, finding red flags, and measuring talent

It's important when engaging a candidate to establish rapport. Find a similar interest to talk about. It's even better when that interest comes from the role itself. Ken elaborates on this idea:

"I'm trying to put something in your LinkedIn profile that kind of speaks to you and your background and would make you say, 'All right, let me connect with this person and talk more about them.' And one of the biggest things I always use with people is like, 'Hey, listen, even if you're not looking for a job right now, it always makes sense to connect with a recruiter to know what's going on in the market. I'm a DevOps recruiting expert; I would love to share with you what I'm seeing in the market, and you don't need to be looking for anything now, but a year or two from now, if you're looking for something, I want us to build a relationship that you feel comfortable with.' Because it takes time to build a relationship that you trust somebody, and that's the thing I really pitch to people: that I want to talk to you now when you're not looking so when you're ready you feel comfortable in knowing that I can advocate on your behalf."

Much to my chagrin, job hopping is seen as a very bad thing in hiring. Ken explained:

"People jumping around a lot is always a red flag. Unless you are an H-1B candidate—there are people who are just in situations where they need to take contract jobs—if you have a job, if you're switching jobs every 18 to 24 months, it's just a red flag, because there has to be something there that isn't helping you keep a long-term job. Now, I know people say millennials, millennials, millennials do it. That is true, but a lot of companies are looking for someone to put more than 18 to 24 months into a job. Some clients just won't look at candidates if they jump around that much. They just won't even look at them."

I asked Ken: How do you measure demand for a particular skill or talent? I wasn't surprised to hear that folks are looking for Kubernetes skills.

"Fortunately, I'm part of a company called TEEMA Group, so I can see what jobs are posted out there even with my partners. So when I start seeing a bunch of jobs that are asking for a certain skill set, then I can tell it's more in demand. Like right now, Kubernetes—almost everybody and their cousin is trying to get somebody with some Kubernetes experience. A lot of companies are thinking about containerization, microservices, with Kubernetes relating to the level, and they realize the gains they can make by having it in their environment, and that's a real hot one right now.

"Outside of Kubernetes—I mean, that's just been so consistent. Everything else is just kind of across the board, right? Like, everybody wants AWS—even though more companies are using Google Cloud, because I've heard it's really good, that a lot of people like it. But AWS is the one if you're in a DevOps world, if you don't have AWS experience, you really limit your chances. You almost have to try to get some AWS knowledge to be able to work in probably 80-85% of the DevOps environments out there right now, because it's just been the kind of go-to for so long that people just kind of use it without even thinking about it. I don't know how

many people look at Azure, but AWS is—they dwarf a lot of the competition right now. You need to really get experience with those two if you don't have it."

I asked Ken to elaborate on how he assesses someone's skills for something as new as Kubernetes.

"That takes it back to what we talked about before. That's the position I'm in right now. I have a client who wants someone with some Kubernetes experience and the position has been open for two months, and we can't find anyone with it. When we had one person that was really, really good, what he was looking for, the guy took a different job. What I try to do is help my client understand you need to acquiesce a little bit on some of these skills, and look at someone who has the ability to pick it up, someone that's really good with Docker, has worked with different clusters, has worked a little bit with Kubernetes, and can pick up what they don't know. I try to really focus on what previous situations they were in where they had to learn a technology that they didn't know going into it. Have they a proven aptitude to do what they need to do to get up to speed on a new technology?"

DevOps job titles

There is a significant amount of contention around DevOps job titles. Thankfully, Google's Liz Fong-Jones and Seth Vargo have put the SRE vs. DevOps debate to bed [5]. But what about DevOps Engineer titles?

"You know, it's a two-edged sword. Because before you would have people that called them software engineers, right? But they were using all the different tools. They were using Docker, they were using Jenkins, and they were using all these VM tools, Chef, Ansible, and Puppet, but they were considered software engineers. But people were discounted

then because their title didn't say 'DevOps engineers,' but they were, right? And you still see a little bit of that today. So, what's happened now is that everybody has 'DevOps engineer' on their resume. I mean, not that they don't have the experience—because a lot of them do have decent experience—but it's like if someone has touched any type of automated system or automation tool, or even just done shell scripting, they put DevOps on their resume, and they're a DevOps engineer."

Any prominent titles other than DevOps Engineer?

"DevOps engineers is a big one. Site reliability engineer is always out there. Build and release. I mean, those are the three that you see all the time. And then some people just call themselves 'software engineers,' but if you look at their resume and read through it, then they're doing a lot of DevOps stuff. But the DevOps title has definitely proliferated a lot, and it's on everybody's resume; it's just a hot buzzword."

I hope you found our conversation as enlightening as I did.

Links

- [1] https://kenmmiddleton.com
- [2] https://yourdevopsrecruiter.com/
- [3] https://twitter.com/notnownikki/ status/978752814955597825
- [4] https://opensource.com/open-organization/16/6/hiringopen-organization-culture
- [5] https://www.youtube.com/ watch?v=uTEL8Ff1Zvk&feature=youtu.be

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