Moving Toward Professionalization:

Rising Need for Open Source Skills in 2016

May 2016
Executive Summary

In the last decade, open source development has experienced a massive shift: Once a mostly community- and volunteer-based concern, the model has since become a mainstay of the IT industry. Flexibility in accommodating new technologies and speed at adapting to a changing market have made open source vital to modern companies, who are now investing zealously in open source and open source talent.

More and better code is the way forward, and the skilled professionals who can make it happen are highly in demand. To look more closely at why open source talent has such a strong advantage across the tech industry, Dice and The Linux Foundation partnered to create a newly expanded jobs report that goes beyond Linux to examine trends in open source recruiting and job seeking. The report also takes a broader perspective as it seeks to understand what employers can do to attract and retain open source professionals. Both hiring managers and open source professionals were surveyed to gain a 360-degree view of the thriving open source jobs landscape. The resulting report uses data from the 2015 Linux Jobs Report to illustrate year-over-year industry trends, but these are not intended to be direct comparisons.

The 2016 Open Source Jobs Report clearly illustrates hiring managers’ enthusiasm for open source talent and the professionalization of open source throughout the industry. This year’s survey includes responses from more than 400 hiring managers at corporations, small and medium businesses (SMBs), government organizations, and staffing agencies across the globe—as well as responses from more than 4,500 open source professionals worldwide.

Key findings from the 2016 Open Source Jobs Survey and Report show that:

- **Companies are experiencing increased demand for open source talent.** A clear majority, 65 percent, of hiring managers report open source hiring will rise more than hiring in other parts of their business over the next six months, a larger number than in past Linux jobs reports.

- **DevOps is among the most sought after skills in the industry.** Fifty-eight percent of hiring managers are seeking DevOps professionals, though the need for developers continues to top their list at 74 percent. Open source professionals (13%) identified DevOps as the most in-demand skill today.
• **Open source networking is a leading emergent technology.** As the second most in-demand knowledge area, 21 percent of hiring managers say networking has the biggest impact on open source hiring. Only cloud technologies remain more sought after, with 51 percent of hiring managers saying technologies like OpenStack and CloudStack most impact their hiring decisions.

• **Open source professionals want to innovate and collaborate.** Only two percent of professionals stated that money and perks were the best thing about their jobs.

**Sharp eyes are on the lookout for open source talent.**

Open source is now the go-to platform for building software and technology. And the demand for talent to support it is a major priority among recruiters. Fifty-nine percent of hiring managers say they’ll add more open source pros to their ranks in the next six months. This is a nine percent jump over last year’s Linux Jobs Report, which found 50 percent planning to add Linux talent in the following six months. Within the same time frame, open source hiring is slated to become the top field of recruitment, with 65 percent of employers reporting more open source hiring than hiring in other parts of their business.

The survey revealed evidence that the technology economy continues to improve and drive hiring demand, with 57 percent of hiring managers reporting they plan to bring in more open source professionals—a leap over the previous year’s 44 percent who were economically inspired to hire Linux talent.

With more than nine in 10 Amazon Web Services clouds running Linux, the rising demand for open source skills is clear—and attracting professionals has proven tricky for hiring managers¹. Eighty-seven percent surveyed report difficulty in finding the right skills and expertise, reflecting the intense competition amongst employers in attracting skilled talent.

Trained professionals seize the best jobs.

**HOW OPEN SOURCE PROFESSIONALS KEEP SKILLS UP TO DATE**

- Read books, online resources; access free online tutorials: 90%
- Take online training courses: 60%
- Attend conferences and/or events: 45%
- Engage in social and professional networking: 42%
- Contribute to open source software projects: 41%
- Participate in open source meetups: 35%
- Attend instructor-led open source training: 23%

Having trained talent on board means professionalizing open source development—and supporting some of the largest shared tech investments in history. This makes certified professionals a hot commodity. Just over half of hiring managers prioritize hiring those formally trained in open source, while 44 percent report that candidates holding certifications were more likely to be hired. Candidates with DevOps and application development expertise—the most marketable skills in the industry—have fifty-eight and sixty percent of surveyed hiring managers seeking them out, respectively.

Open source professionals recognize this and are responding to the demand: 76 percent believe certifications are useful for their careers and 47 percent plan to take a certification exam this year, while only one percent of respondents state they have taken all the certification exams needed for their careers. Hiring managers are championing these ambitions, with 34 percent willing to aid with the cost of an employee’s open source certification.

Formal open source training offers a level of depth and accuracy that piecemeal approaches can’t achieve, and it is clear open source professionals are embracing training and certification developed by industry experts. Those working in the industry say they keep their skills up to date with free online tutorials (90%), paid online training courses (60%), conferences and events (45%), social and professional networking (42%), contributing to open source projects (41%), participating in open source meetups (35%), and attending instructor-led open source training (23%).
Networking will take open source to the next level.

**WHAT ARE THE MOST IMPORTANT OPEN SOURCE SKILLS?**

<table>
<thead>
<tr>
<th>Open Source Professionals:</th>
<th>Hiring Managers:</th>
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<tbody>
<tr>
<td>50% Cloud technologies (OpenStack, Cloud Foundry, etc)</td>
<td>51% Cloud technologies (OpenStack, Cloud Foundry, etc)</td>
</tr>
<tr>
<td>9% Networking technologies</td>
<td>21% Networking</td>
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<tr>
<td>19% Containers</td>
<td>8% Containers</td>
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<tr>
<td>16% Security</td>
<td>14% Security</td>
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<tr>
<td>5% Other</td>
<td>7% Other</td>
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Over the last year, the continuing rise of open cloud platforms and the increasing need for support for open source security projects have created even more demand for pros with special expertise in that area. Fifty-one percent of surveyed hiring managers say knowledge of OpenStack and CloudStack has a big impact on open source hiring decisions.

Emerging technologies equal new opportunities for open source professionals—and the biggest right now is open source networking. Because open source is built collaboratively, it’s built faster and with more adaptability than any proprietary platforms. So it’s no surprise that companies are setting their strategies around networking, with 21 percent of hiring managers reporting that networking knowledge has the biggest impact on open source hiring, followed by security experience (14%) and container skills (8%).

Nineteen percent of open source employees believe containers will be the next big arena for open source growth in 2016, while half of those surveyed foresee open cloud technologies to be the largest growing technology in 2016. Security ranks third in level of growth among open source pros at 16 percent, followed by networking at 9 percent.
The highlights of being an open source pro.

**WHAT IS THE BEST THING ABOUT BEING AN OPEN SOURCE PROFESSIONAL**

- Interesting projects: 31%
- Working on the most cutting-edge technology challenges: 18%
- Collaboration with a global community: 17%
- More job opportunities: 12%
- Working with some of the world’s best developers: 12%
- Job stability: 5%
- Money and perks: 2%
- Other: 3%

With open source talent both scarce and in high demand, employers are willing to offer compelling perks to entice and retain those with the right stuff. Seventy-nine percent of hiring managers say their companies have increased incentives to hold on to employees, with 44 percent hiking up salaries for open source talent more than in other parts of the company, and 43 percent offering more flexible work hours and telecommuting—all significant increases over the 2015 Linux Jobs Report (71%, 36%, and 37%, respectively).

It’s easy for open source professionals to see how valuable they’ve become: Half of those surveyed were offered an incentive to keep them from switching jobs in the past year, while 73 percent were contacted by a recruiter at least once in the past six months. Eighty-six percent believe their open source skills have advanced their careers.

But despite incentives that would lure open source professionals to change to another company, (salary, 31%; better work/life balance, 19%; and training and certification opportunities, 11%), the report also found money and perks are the least likely reasons for professionals to seek an open source career.
It’s about inspiration and collaboration.

What makes being an open source pro so great? Being able to work on interesting projects is the winning answer, while working with the most cutting-edge technologies ranks second-best. Third is the motivation felt by collaborating with a global community. Clearly, open source professionals are passionate about their craft and are finding meaningful satisfaction in their work. And employers are learning how to keep ushering open source toward its fully professionalized potential, making the technology industry—and the world—stronger and better.

2016 Open Source Jobs Report Methodology

During March 2016, Dice and The Linux Foundation surveyed both hiring managers and open source professionals about their jobs needs and preferences. Hiring managers from corporations, small and medium businesses (SMBs), government organizations, and staffing agencies were surveyed. More than 400 responded with 77.5 percent indicating their company was headquartered in North America, 8.5 percent in Europe, 6.3 percent in Asia (except Japan), 2.5 percent in South America, 1.1 percent in Africa, 1.1 percent in Japan, 1.1 percent in Australia/New Zealand, and less than 1 percent in the Middle East, Mexico, and Central America. Respondents needed to have hired at least one open source professional in the last year, or have plans to hire open source professionals in 2016 to participate in the survey. In addition, more than 4,500 open source professionals responded to a survey, with 71 percent indicating they’ve been working as an open source professional for three years or more.

About Dice

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About The Linux Foundation

The Linux Foundation is the organization of choice for the world’s top developers and companies to build ecosystems that accelerate open technology development and commercial adoption. Together with the worldwide open source community, it is solving the hardest technology problems by creating the largest shared technology investment in history. Founded in 2000, The Linux Foundation today provides tools, training and events to scale any open source project, which together deliver an economic impact not achievable by any one company. More information can be found at www.linuxfoundation.org.
The Linux Foundation is the nonprofit advancing professional open source management for mass collaboration.

To learn more about The Linux Foundation or our other initiatives please visit us at www.linuxfoundation.org