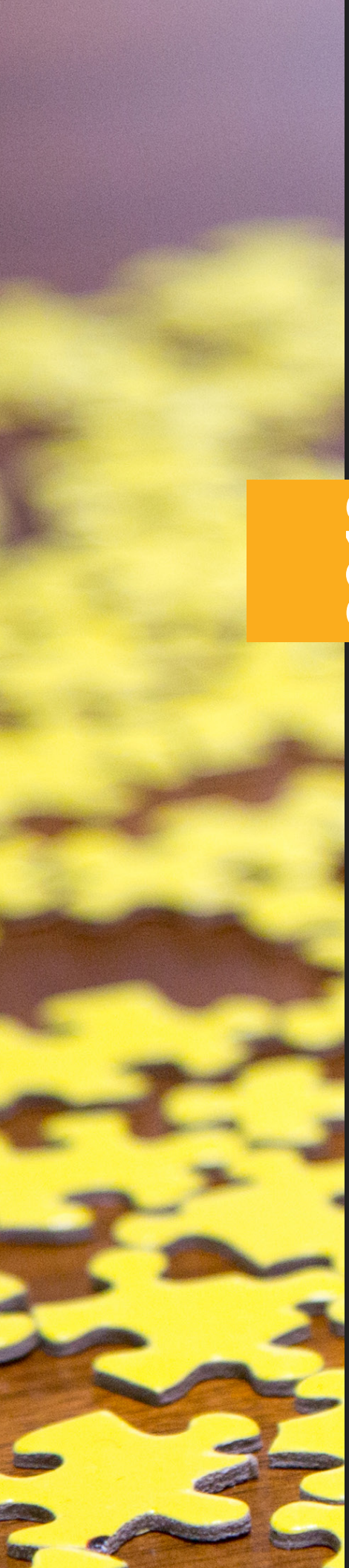


2016

DevOps Salary Report

puppet

Contents

Introduction and key findings

This year, more than 4,600 technology professionals from around the world took the fifth annual State of DevOps survey, presented by Puppet and DevOps Research and Assessment (DORA). Together we created the **2016 State of DevOps Report**, which is the most comprehensive study of DevOps practices available today. This year's report shows again that DevOps practices such as continuous delivery and automated testing contribute to both IT team performance and an organization's overall productivity and performance.

In addition to DevOps practices and performance, Puppet also looked at salary data. As we have in years past, we analyzed salaries by geographic region,industry, and gender to provide insight into workforce trends. This year's survey also collected data on the number of servers and employees at respondents' organizations.

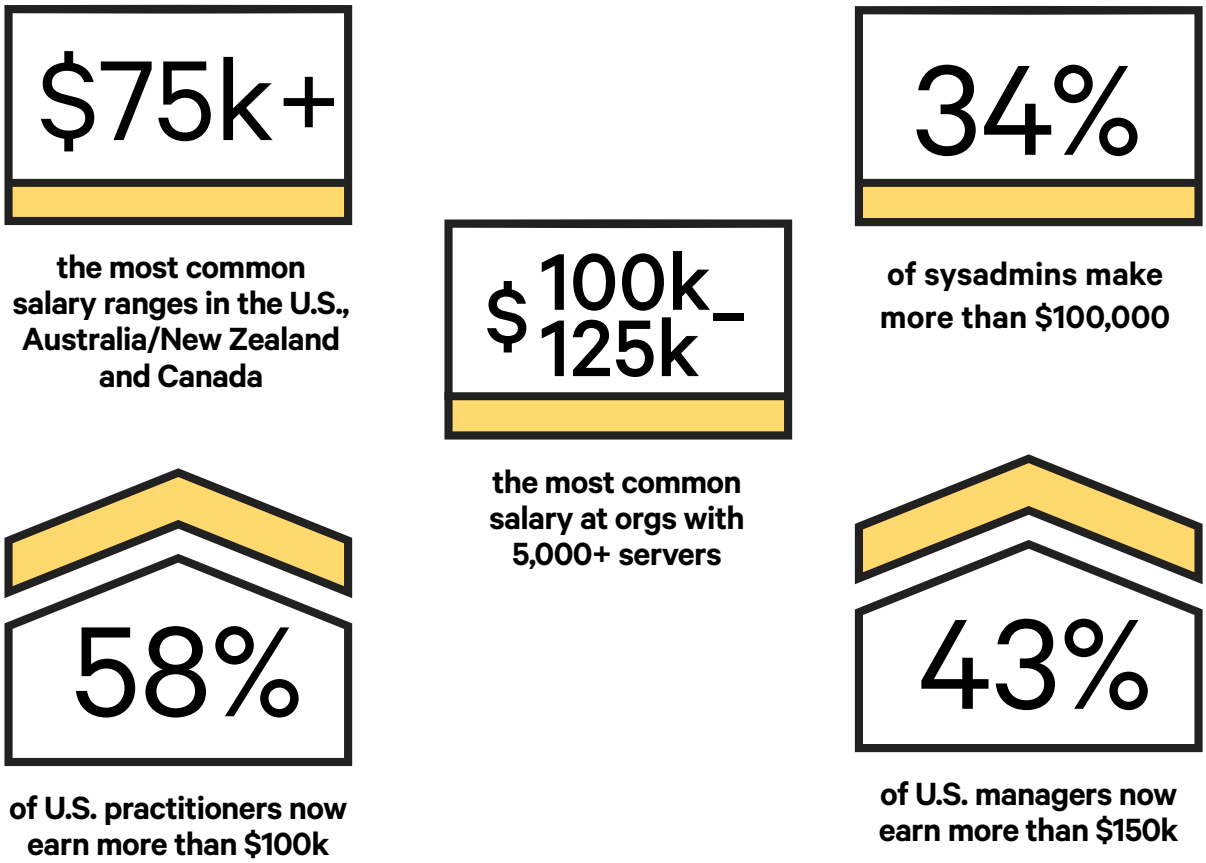
To reflect the rapidly changing nature of IT and DevOps work, this year's survey offered more flexibility to respondents when defining their job titles. Respondents could enter their own job title this year, rather than selecting a title from the list. As a result, this year's report presents data related to job titles without inferring trends from previous years, as the methodological differences would make such trends less meaningful. You can still read the **2015** and **2014** DevOps Salary Reports, though.

Since most respondents are based in the United States, Europe, or Asia — approximately 50 percent in the United States alone — much of our salary analysis is focused on these regions. And while we received more responses from women compared to 2015, the sample size of women (less than 6 percent of all respondents) remains too small to infer statistically meaningful correlations between gender and compensation. Unless otherwise noted, we are displaying detailed results only for groups with at least 200 respondents.

We invite you to peruse our findings, see how your own salary stacks up to others in your region and industry, and participate in the survey next year. We also encourage you to discuss the findings in this report with your colleagues, and urge them to respond to next year's survey, too.

Key findings

1. **IT practitioners earn more in the United States, Australia/New Zealand and Canada.** The most common salary range in the United States is $100,000-$125,000, and in the Australia/New Zealand region and Canada it's $75,000-$100,000 (expressed in U.S. dollars).
2. **Salaries for IT practitioners in the United States jumped up this year.** The most common salary range moved from $75,000-$100,000 in 2015 to $100,000-$125,000 in 2016, and the percentage earning more than $100,000 increased from 47 percent to 58 percent.
3. **Sysadmins aren't making as much as their practitioner peers.** The most common salary range for sysadmins in the United States is $75,000-$100,000 and 34 percent earn more than $100,000, while the four other most common IT practitioner job titles are most likely to make $100,000-$125,000 and over half earn more than $100,000.
4. **IT practitioners earn more at organizations with more servers.** The most common salary range at organizations with more than 5,000 servers is $100,000-$125,000, while it's $75,000-$100,000 at organizations with fewer than 5,000.
5. **Manager salaries are almost off the chart.** The percentage of managers in the U.S. earning more than $150,000 jumped from 26 percent in 2015 to 43 percent this year.

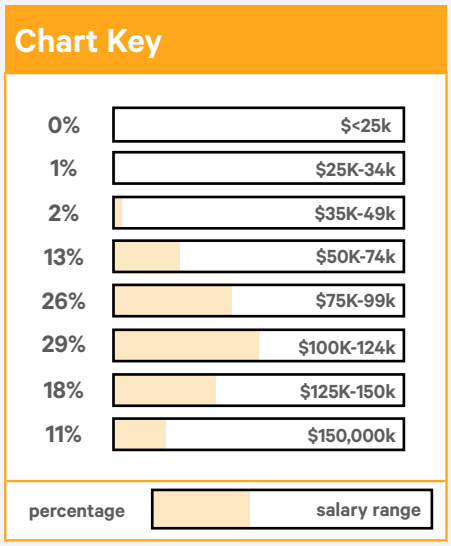


Understanding the report

What the charts are telling you

We provided survey respondents with salary ranges and asked them to identify where they fell. Starting on page 7, you'll see a color-coded key for these salary bands, which we use for all the charts.

Salary ranges are expressed in U.S. dollars, including those for international respondents. We did not adjust for cost of living. Beside each salary-range bar, you'll see a percentage figure; that's the percentage of respondents whose earnings fall within that salary range.



How we're breaking down job titles

In this report we'll compare salaries based on the roles of IT practitioner and manager.
Note: the manager group does not include C-level executives.

Here are some of the most common job titles we classified as IT practitioners:	Here are some of the most common job titles we classified as managers:
System administrator	**Director**
Systems developer or engineer	**IT manager**
DevOps engineer	**Manager**
Architect *(excluding cloud, infrastructure, and systems architects)*	**DevOps manager**
Software developer or engineer	**Engineering manager**
Technical coach / consultant	**Director of IT**
Analyst	**Development manager**
Operations engineer	**Software development manager**
Infrastructure developer or engineer	**Operations manager**
Systems architect	**Product manager**
Automation engineer	**VP of engineering**
Cloud or infrastructure architect	**Director of engineering**
Application developer or engineer	**Director of operations**
Build or release engineer	**Managing director**
Web developer or engineer	**Program manager**
Cloud developer or engineer	**Project manager**
Database administrator	**Release manager**
Network engineer	**Senior manager**
QA engineer	**Configuration manager**
	Technical manager

Salaries of IT practitioners in the Americas, Europe, Australia/New Zealand, and Asia

As in 2015, IT practitioners in the Australia/New Zealand region, the United States, and Canada earn the highest salaries compared to other regions, including Western Europe. The most notable change is in the United States; it's the only region where salaries increased by a large enough amount to move the region's most common annual salary from the $75,000–$100,000 band up to the $100,000–$125,000 band.

The most common salaries for practitioners in all other regions remained the same, though the average salaries increased in Western Europe, Australia, and Canada, particularly at the highest band of $150,000+.

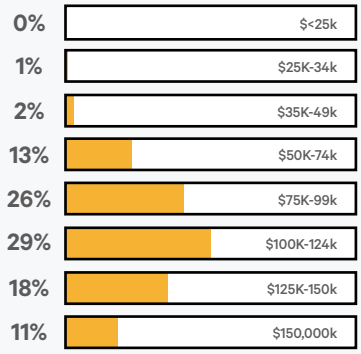
Respondents in Asia, Eastern Europe, and the Latin America/Caribbean region continue to skew strongly toward the lowest salary bands, and with no greater insight into the reasons why. Managers in Asia reported salary gains compared to 2015, though the sample size remains too small to infer its significance. Salaries among Asian practitioners did not see the same gains. We continue to speculate that relative organizational maturity in DevOps practices, different economic contexts, and a higher concentration of DevOps adoption in Western Europe and the United States drive these trends in salary disparity.

By allowing respondents to define their roles, we've seen very different divisions between practitioners and managers. Canada reports the most self-defined practitioners earning $75,000-$100,000 (43 percent), followed by Australia and New Zealand (37 percent), the United States (26 percent), and Western Europe (20 percent). Each of these percentages are smaller than those reported in 2015 — in some cases, dramatically so — but due to changes in methodology, we can't define these differences as trends.

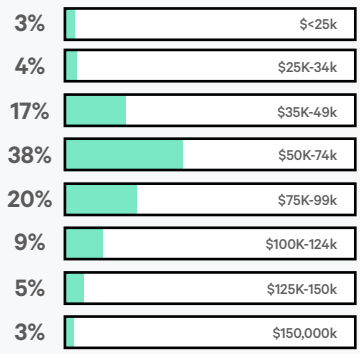
While we collected useful data about regions outside of the United States, we still lack statistically comparable information to provide the same detailed insight for these regions. To help us report more about DevOps workers around the world, please send feedback and ideas for improving our data to **devopssurvey@puppet.com**.

Salaries of IT practitioners in the Americas, Europe, Australia/New Zealand, and Asia

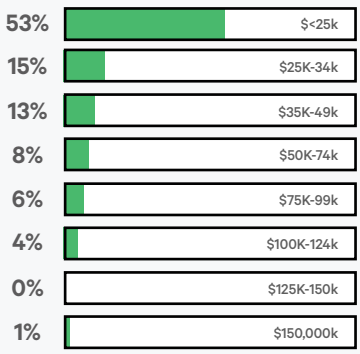
United States



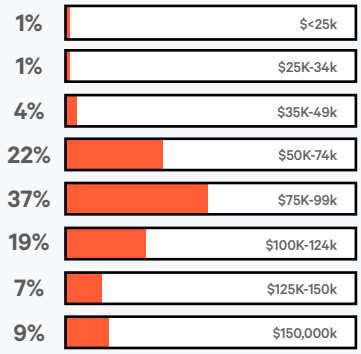
Western Europe



Asia

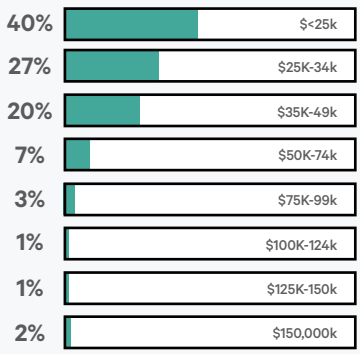


Australia/New Zealand



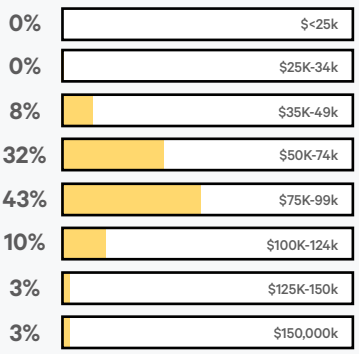
less than 200 respondents

Eastern Europe



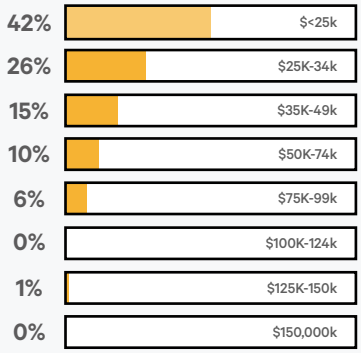
less than 200 respondents

Canada



less than 100 respondents

Latin America/Caribbean

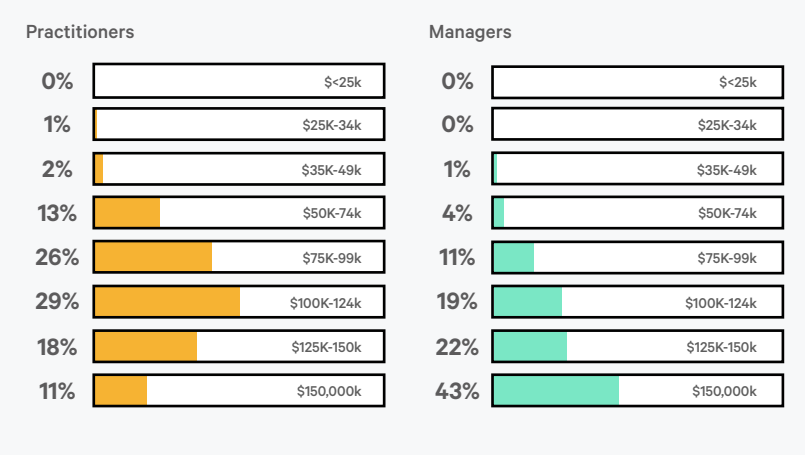


less than 100 respondents

Salaries of practitioners and managers

Practitioner salaries in the United States have increased, with 58 percent earning $100,000 per year or more (up from 47 percent in 2015). The most common salaries reported by practitioners and managers in the United States in 2016 fall into the $100,000–$124,999 and $150,000+bands, respectively. Both of these increased from 2015, when the most common salary was $75,000-$99,999 for practitioners and $125,000-$149,999 for managers.

United States



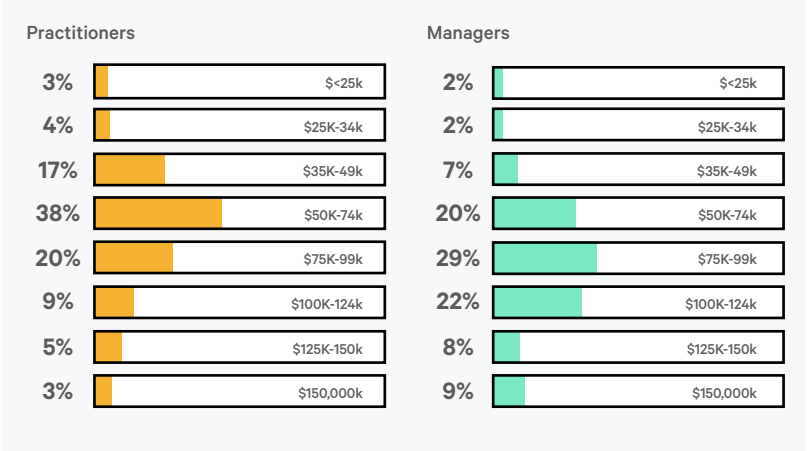
Manager salaries in the United States cluster at the top, with 84 percent earning $100,000 or more, the same as in 2015. Forty-three percent earn more than $150,000, up from 26 percent in 2015.

In Western Europe, the most common salaries reported among practitioners and managers were in the $50,000-$74,999 and $75,000-$99,999 ranges, respectively. The same was true in 2015.

In Asia, the most common salary range reported by practitioners is less than $25,000, which remained the same from 2015. Managers in Asia reported salaries in the $35,000-$49,999 range, which is up from $25,000-$34,999 in 2015. Of note, our sample size for Asian managers is too low to report a distribution, but as an aggregate we saw the median shift this year.

Where managers in the rest of the world typically make at least one salary step more than practitioners, most managers in the United States make at least two salary steps more, even despite the differences in reported practitioner salaries in 2016. This data suggests the wage gap between practitioners and managers continues to be more pronounced in the United States than elsewhere.

Western Europe



IT practitioner salaries in five industries

If you're in the United States, our data shows that you're more likely to make a better salary if you are a tech practitioner in technology, finance, or healthcare. Unlike the 2015 survey, the 2016 survey did not distinguish web software as a separate field.

Technology salaries once again trended higher in the United States. Sixty-five percent of practitioners in the technology industry make more than $100,000, which is up from 58 percent last year. The most common salary range for U.S. practitioners in the technology industry changed from $75,000-$99,000 in 2015 to $100,000-$124,999 this year.

Technology was the most common industry selected by respondents in every geographic region. While the sample sizes were not as robust as we would like, both Western Europe and Asia had at least 150 practitioner respondents in the technology industry, so we're sharing data for those regions for you to use directionally. In Western Europe, the most common salary for technology practitioners is $50,000-$75,000, and 75 percent make between $35,000 and $99,999 (up slightly from 74 percent in 2015). The most common salary for Asia is less than $25,000, and 68 percent make less than $35,000 (compared to 74 percent in 2015).

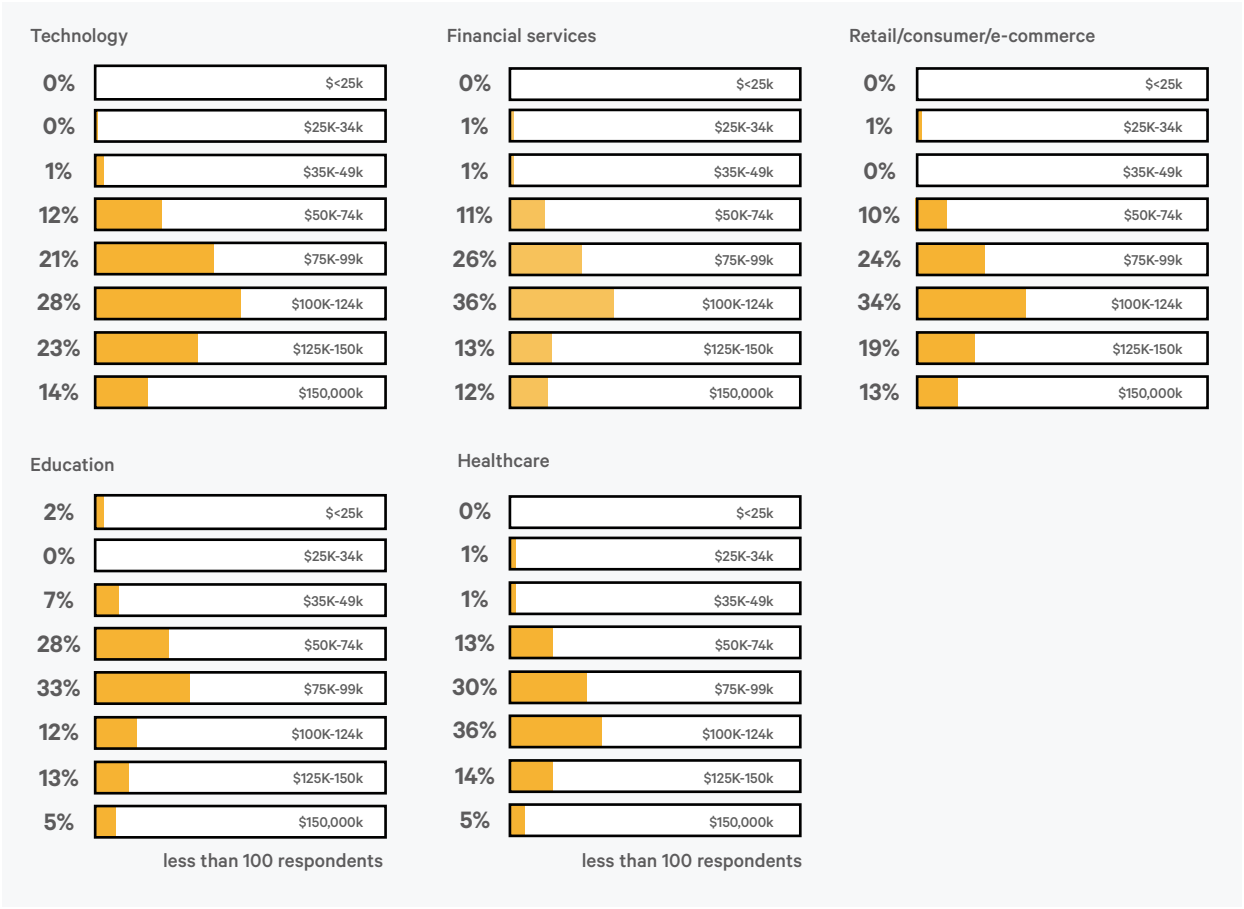
The most common salary range for U.S. practitioners in retail/consumer/e-commerce, healthcare, media/entertainment and financial services is $100,000–$125,000, and for education and government it's $75,000-$100,000.

U.S. respondents in the education field reported a broad distribution of salaries — 61 percent in the $50,000–$100,000 band (up from 68 percent in 2015), and 30 percent in the $100,000+ band (up from 20 percent in 2015). This broad distribution suggests that educational institutions with the resources to do so are competitively investing in IT and DevOps practitioners, while others might be limited by budgetary pressures.

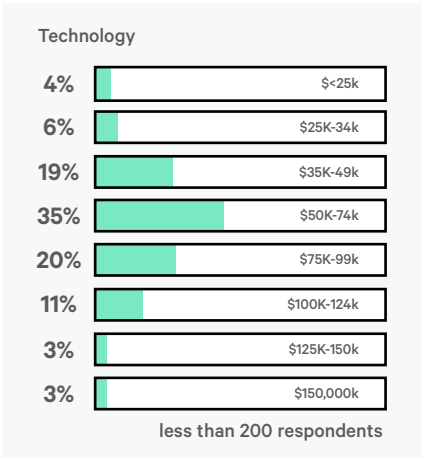
In the media/entertainment sector, 65 percent of U.S. practitioners make more than $100,000 per year, while in finance, 61 percent of practitioners make more than $100,000 per year. Fifty-five percent of practitioners in healthcare report making $100,000 or more per year. In each of those sectors, more than a third of practitioners made $100,000–$125,000 per year.

IT practitioner salaries in five industries

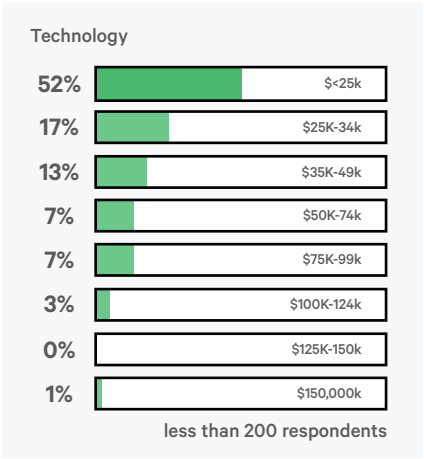
United States



Western Europe



Asia



IT practitioner salaries by job title, United States

Due to the 2016 State of DevOps survey allowing respondents to provide their own job title, most titles have a much smaller sample size and different common salaries than in past years. Most notable is the decrease in DevOps engineer representation, which we believe might be due to respondents identifying as something other than "DevOps engineer" when the option was not available to them.

The five most common job titles — system administrator, systems developer or engineer, DevOps engineer, software developer or engineer, and architect (excluding cloud, infrastructure, and systems architects) — accounted for more than half of all U.S. respondents. Among those groups, only system administrators had a most-common salary band of $75,000–$100,000. The other four groups' most common salaries fell in the $100,000–$125,000 band.

The relative salary increases among corresponding groups in 2015 suggest software and systems developers (or engineers) accounted for much of the U.S. practitioner group's overall salary band increase to $100,000–$125,000 — though again, sample sizes for these segments are lower than in 2015, and might reflect differences in survey methodology.

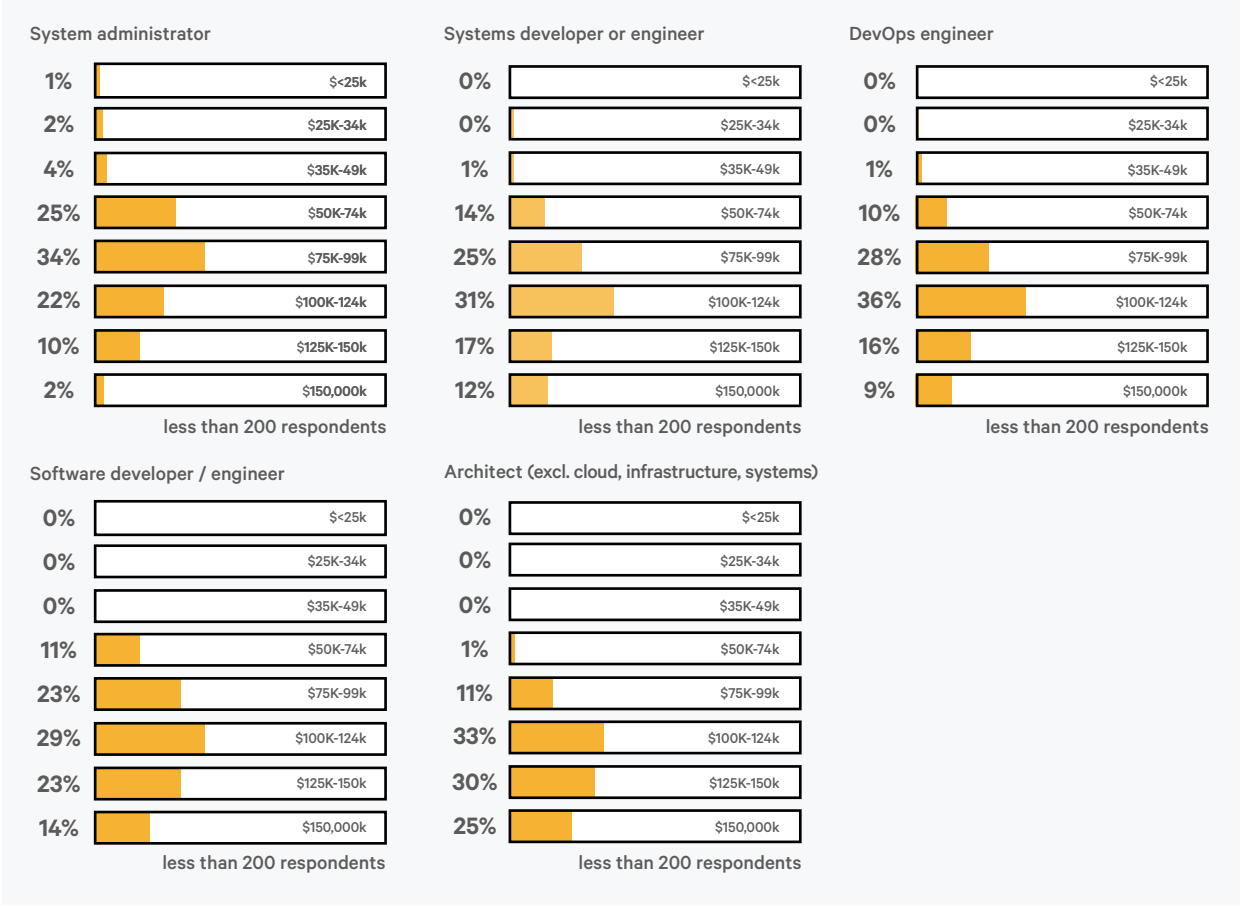
DevOps engineers, architects, software developers and engineers, and systems developers and engineers in the United States are more likely than not to make more than $100,000. Sixty percent of systems developers and engineers, 64 percent of DevOps engineers, and 61 percent of software developers and engineers reported a salary of more than $100,000. Among architects, 88 percent reported salaries of more than $100,000, and 25 percent make more than $150,000. Despite the differences in methodology, this finding aligns with past data suggesting that organizations with the most mature DevOps practices are more likely to pay IT operations employees $100,000 or more.

For U.S. system administrators, 34 percent reported salaries of $100,000 or more per year, and 68 percent reported salaries of $75,000 or more per year. However, 32 percent of system administrators also reported making less than $75,000 per year. Compare that proportion to fewer than 15 percent of any the other most common segments, and to a single respondent (less than 1 percent) of the architect segment.

In 2016's data, a smaller proportion of U.S. DevOps engineers make more than $125,000 per year than systems or software developers and engineers, with the gap increasing in the $150,000+ band. This is in stark contrast to systems and software engineers in Western Europe, where all three groups most frequently fell in the $50,000–$75,000 salary band.

IT practitioner salaries by job title

United States



IT practitioner salaries in seven U.S. states

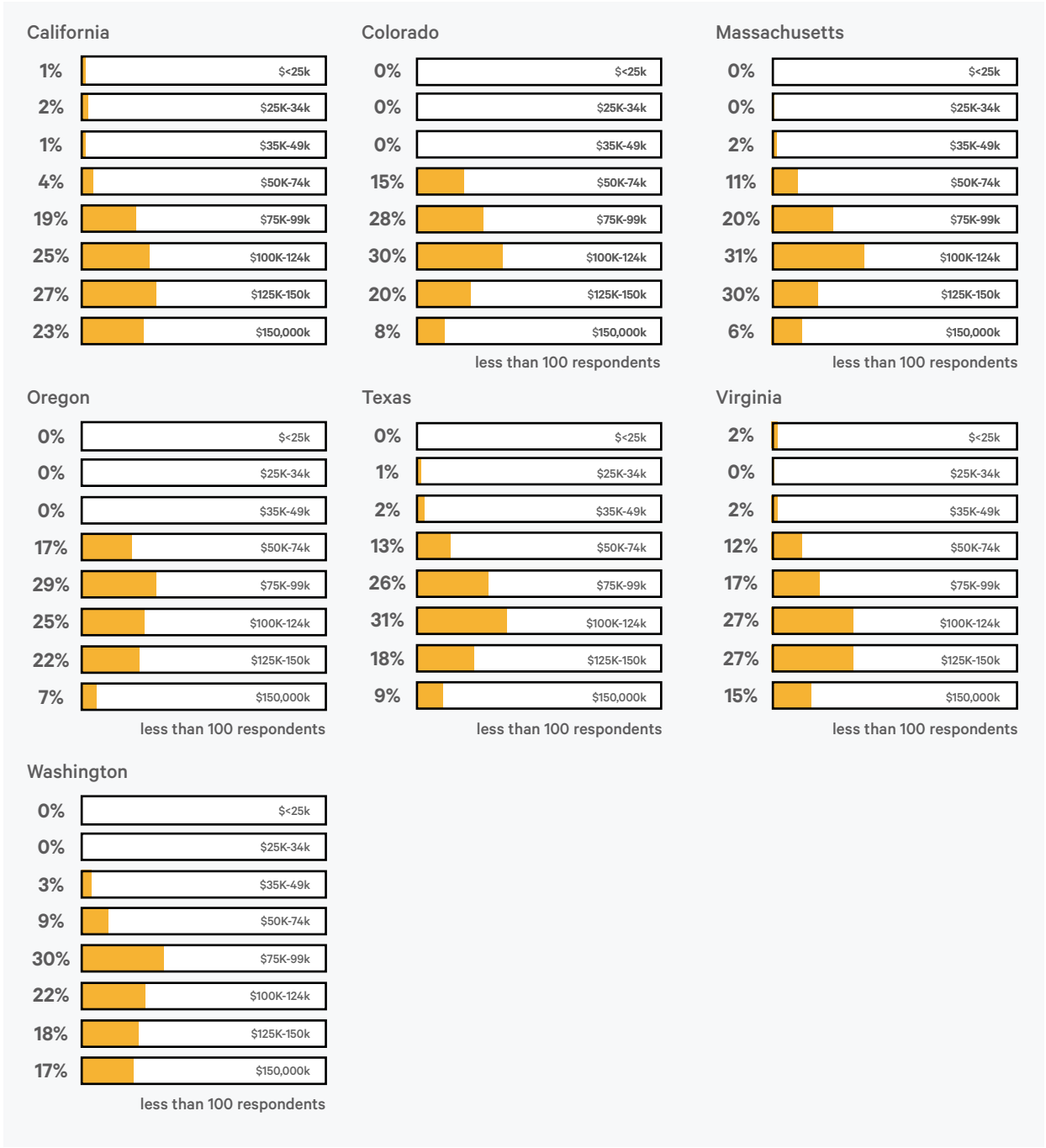
U.S. survey respondents represented most of the 50 states, but only California had more than 200 practitioner respondents, most of them systems developers or engineers. Practitioner salaries are notably high in this state: 75 percent of respondents earn $100,000 or more, up from 68 percent in 2015.

The proportion of California practitioners making $150,000+ (23 percent) is nearly equal to the proportion making $100,000 or less per year (26 percent). Most states had much larger gaps between the groups making more than $150,000 per year and those making more than $150,000 per year, even though most states reported similar proportions of practitioners making $100,000–$150,000 per year.

Practitioners in Texas, Oregon, Colorado, and Massachusetts all reported salary distributions similar to each other, and more distributed than California's, though the most common salaries in Oregon skew one band lower. Virginia and Washington reported distributions more similar to California, with larger groups making $150,000 or more, and more practitioners making $100,000 or more.

IT practitioner salaries in seven U.S. states

United States



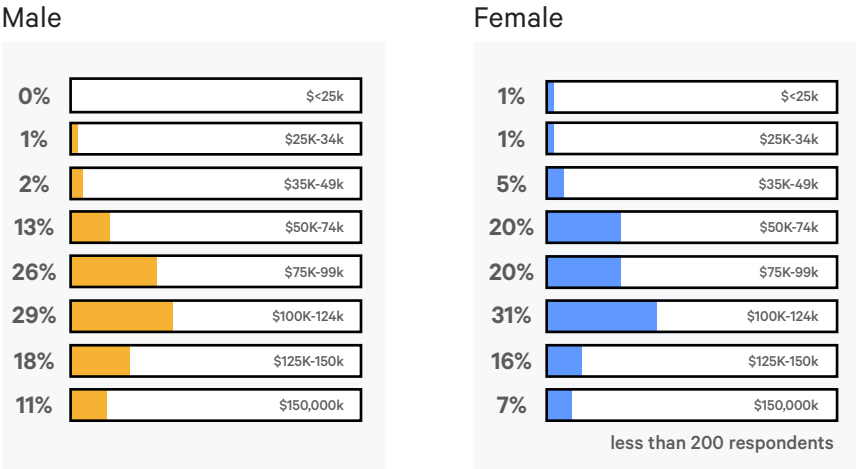
IT practitioner salaries by gender

More than 99 percent of the 2016 survey's practitioners reported their gender, up 1 percent from 2015's initial gender survey. More than 94 percent of them identified as male, down from 95 percent in 2015, and a fraction of 1 percent selected "Other."

Because of the small sample sizes beyond men (out of 2,808 practitioners globally and 1,358 in the United States, 156 and 101 identified as women), we still cannot confidently compare salaries by gender in detail. In this section we've limited the analysis to respondents in the United States, because salaries tend to vary most by geographic region and there were very few female practitioner respondents outside the United States.

From the data we are comfortable in reporting, we found that 95 percent of practitioners — both male and female — made $50,000 or more per year. There were no gender lines in the practitioner group's jump from the $75,000–$100,000 salary band to the $100,000–$125,000 band.

We'd love to have enough data to make this section of the report fully representative. The state of wage equality in technology is a vital issue with wide-ranging ramifications for recruitment, retention, and workplace culture and diversity. Please encourage people of all genders in your company to contribute to next year's survey, and we're also happy to receive any ideas about improving our data. Email **devopssurvey@puppet.com**.



IT practitioner salaries by number of servers and employees

This year's survey was the first to ask respondents to report the number of servers and employees at their organization. More than 2,500 respondents reported this data, with 80 percent working for organizations with fewer than 5,000 servers, and 20 percent for organizations with 5,000 or more servers.

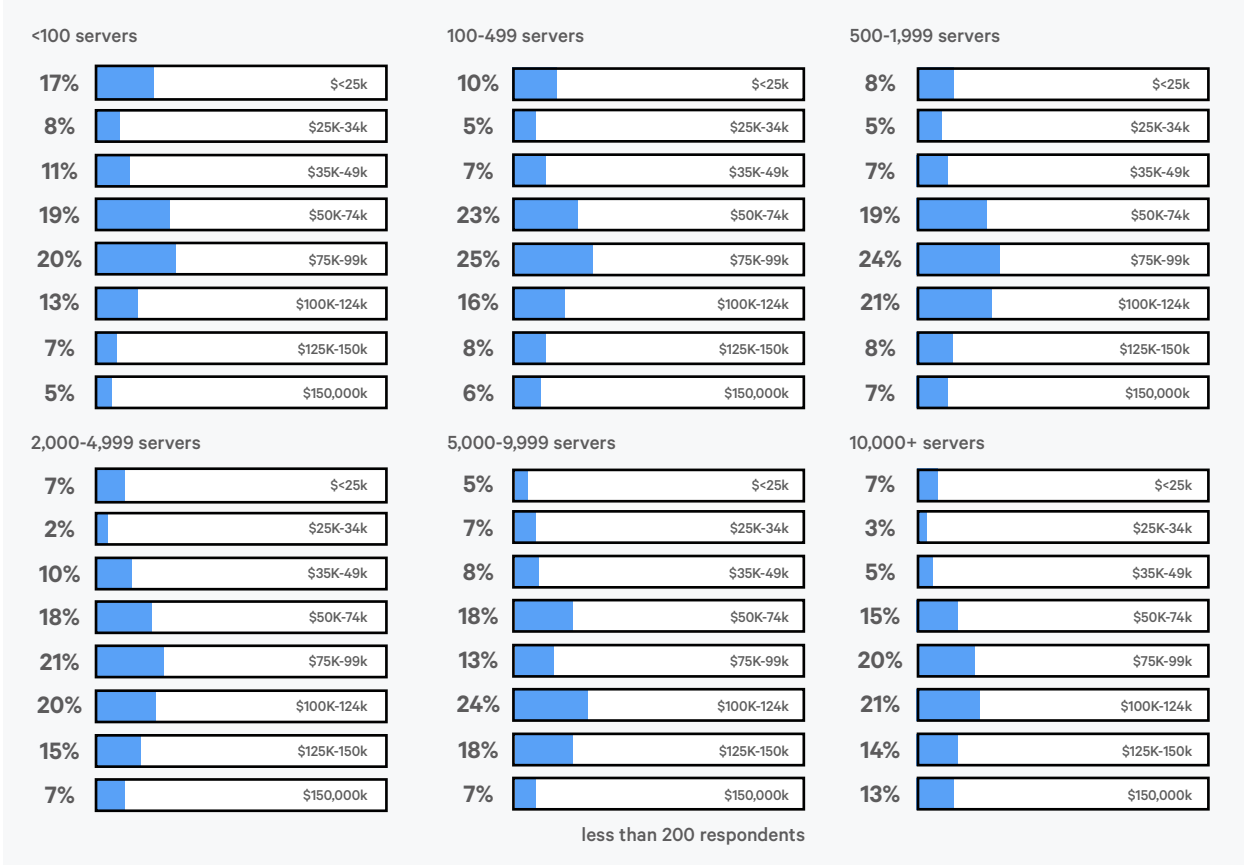
Among respondents at organizations with fewer than 5,000 servers, the most common salary band is $75,000–$100,000, while among respondents at organizations with more than 5,000 servers, the most common salary band is $100,000–$125,000. While pay scales similarly across most segments, the proportion of respondents making more than $150,000 is nearly twice as high at organizations with more than 10,000 servers (13 percent) than at organizations with fewer servers (6 percent).

More than 44 percent of respondents work for organizations with fewer than 500 employees, 33 percent work for organizations with 500–10,000 employees, and 23 percent work for organizations with more than 10,000 employees.

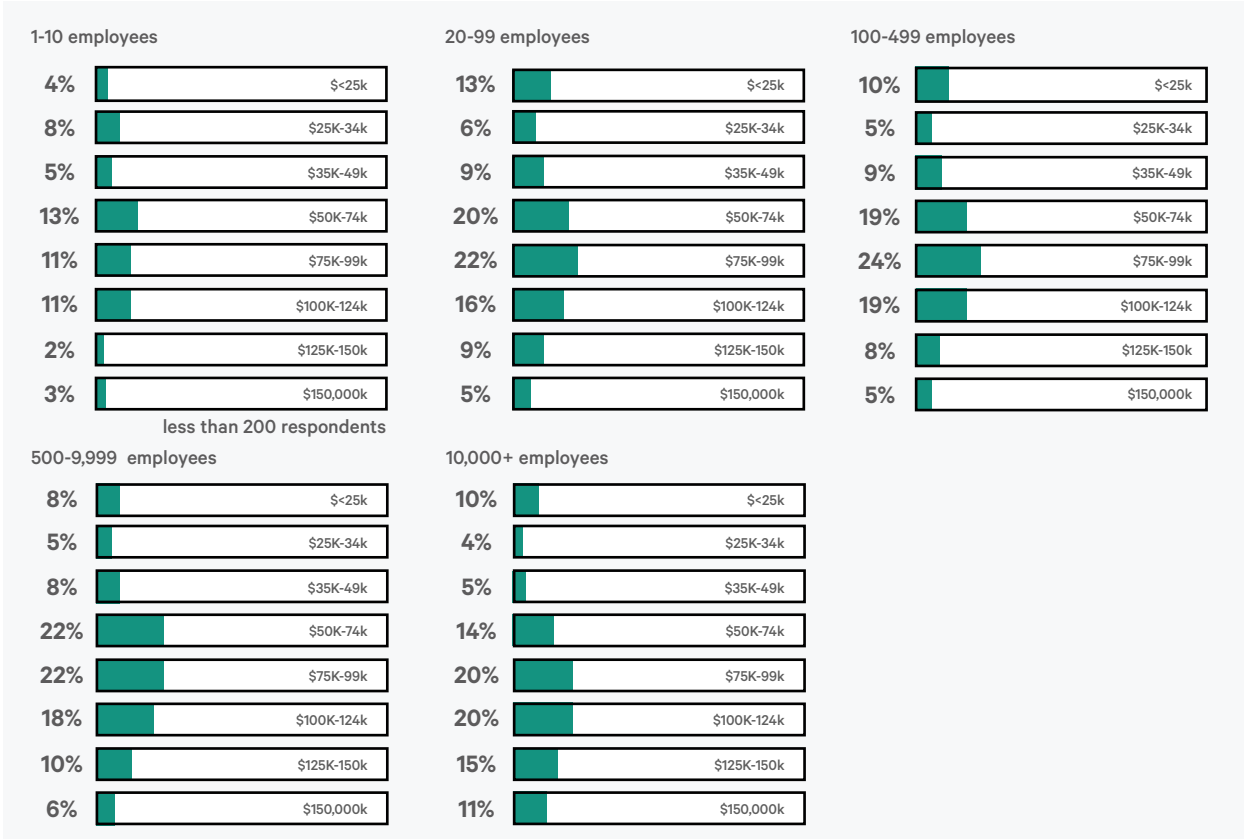
As with the number of servers, there was some relationship between the number of employees and salary levels. Larger organizations again had larger proportions of respondents in higher salary bands, with nearly twice the proportion of respondents at companies with more than 10,000 employees making more than $150,000 per year (11 percent) than respondents at companies with fewer than 10,000 employees (6 percent).

IT practitioner salaries by number of servers and employees

Servers



Employees



Conclusion

We launched the DevOps survey and State of DevOps report five years ago to discover just how DevOps tools, practices and cultural values affected IT teams and the organizations they serve. This year we've gathered a broader range of data, and analyzed it more deeply. We hope the findings, analysis and guidance in this report help you better understand the potential impact of DevOps on your organization.

Thank you for sticking with us all the way through, and we hope you'll take the survey next year.

About Puppet, Inc.

Puppet is driving the movement to a world of unconstrained software change. Its revolutionary platform is the industry standard for automating the delivery and operation of the software that powers everything around us. More than 32,000 companies — including more than two thirds of the Fortune 100 — use Puppet's open source and commercial solutions to adopt DevOps practices, achieve situational awareness and drive software change with confidence. Based in Portland, Oregon, Puppet is a privately held company with more than 400 employees around the world.

Learn more at puppet.com.