



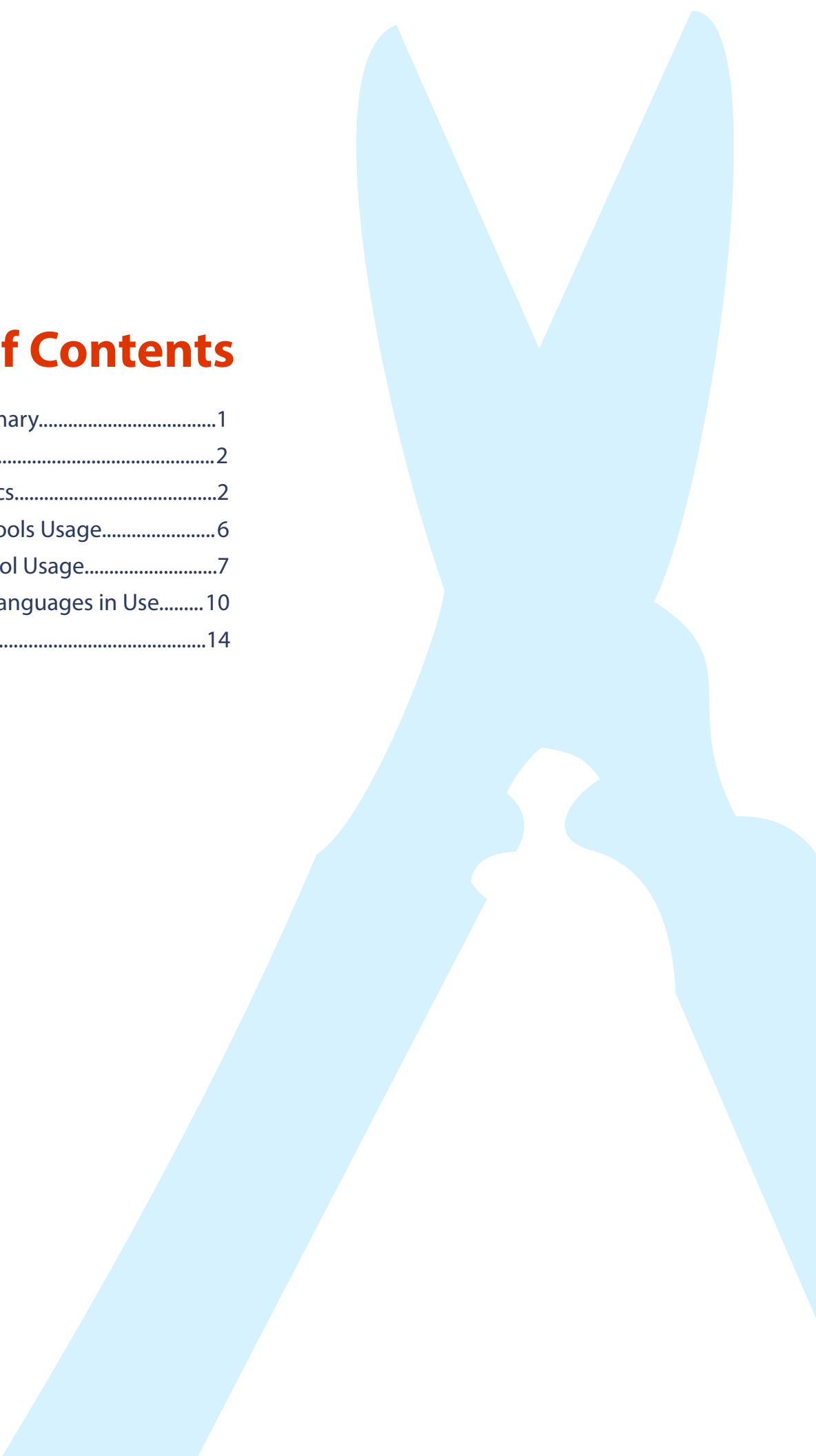
Managing Your DevOps Tool Chest: The Complexity of Herding Kittens

Presented by

Automic™ &  **DevOps.com**

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Executive Summary



This report is an analysis of a survey of over 225 respondents taken in February and March 2016 regarding their IT tool chain and development tools usage. The survey was jointly conducted by Automic Software and DevOps.com.

The survey questions were meant to shed insight into how many development tools were in use at organizations, how many new tools are added, how often and how many are open source.

The analysis of responses were analyzed by applying various filters looking at size of organization, geographic location and whether the respondent was part of a “DevOps-enabled” organization or not.

While geographic location proved to not be a factor as answers were pretty uniform across all geographies, size of organization and DevOps presence were significant factors effecting responses.

Some of the key findings are:

- There is an even distribution of DevOps titled roles and cross-functional teams across organizations of all sizes. Across the board, all companies see the need for a specialized DevOps team.
- Small companies (less than 200 people) do a better job of standardizing on tools than larger companies. The larger you are, the less standardized the toolset is.
- Small companies have five to ten development-related tools in use, mid-sized companies have up to 20 and large enterprises have more than 20 tools.
- Sixteen percent of respondents say 75 percent to 100 percent of their tool stack is open source. Mostly smaller organizations with the percentage of open source use decreasing with increased customer size.

On Tool Standardization:

53%

53 percent of respondents said development teams do not standardize on the same tools.

40%

Nearly 40 percent of respondents said their company currently uses 5 to 10.

53%

However, for large organizations, over 53 percent use 20 or more tools.

Release Frequency:

70%

At DevOps empowered organizations more than 30 percent would like to release code more than once a day and another 40 percent (more than 70 percent total) would like release code daily or weekly.

33%

At non-DevOps organizations more than 33 percent of respondents want releases yearly or quarterly.

Development Language Sprawl:

- The number of development languages in use is increasing as quickly as Dev tools.
- Almost 70 percent of organizations are not standardized on the same language, with half using three to five languages and another quarter using five to ten.

The full findings on the survey are contained in the body of the report.

Findings

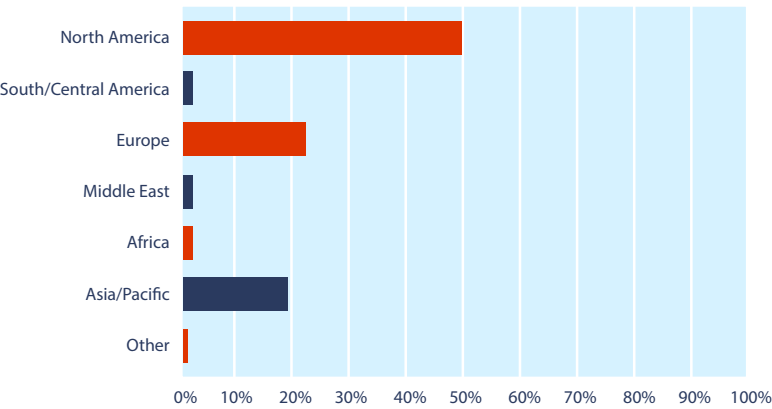
Demographics

The survey responses indicate a pretty even balance in organization size and geographic location. One important distinction is that one group of respondents came from the DevOps.com audience, which tends to be very DevOps proactive. Another group of about 73 responses were more IT Generalists without a DevOps propensity. This resulted in some significant differences in some of the responses.

In terms of geography, the DevOps audience was distributed as follows:

Where are you physically located?

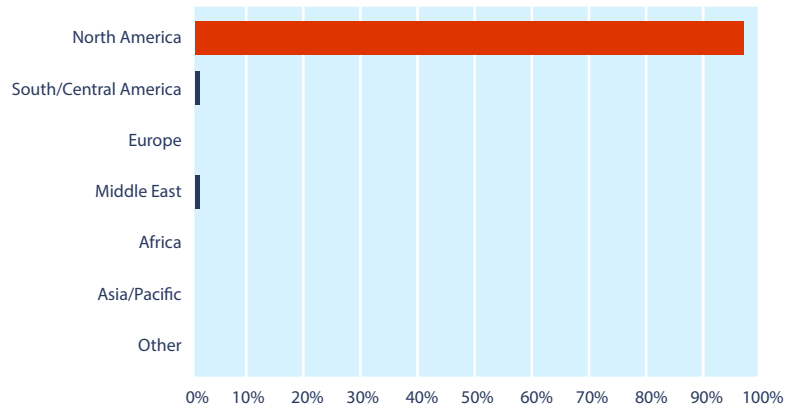
145 ANSWERS



The IT General respondents were almost exclusively North American:

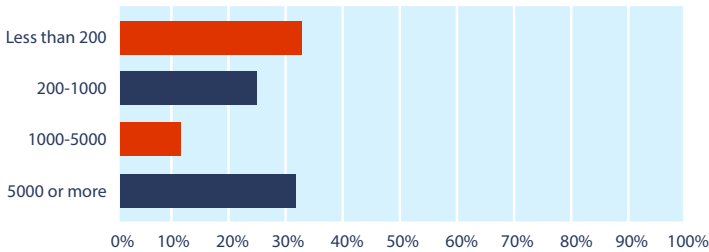
Where are you physically located?

73 ANSWERS



In terms of organization size, the distribution was as follows:

How many employees does your organization have?



Size of companies is about 40 percent over 5000, 36 percent under 200 and the rest in the middle, so a fair mix of sizes.

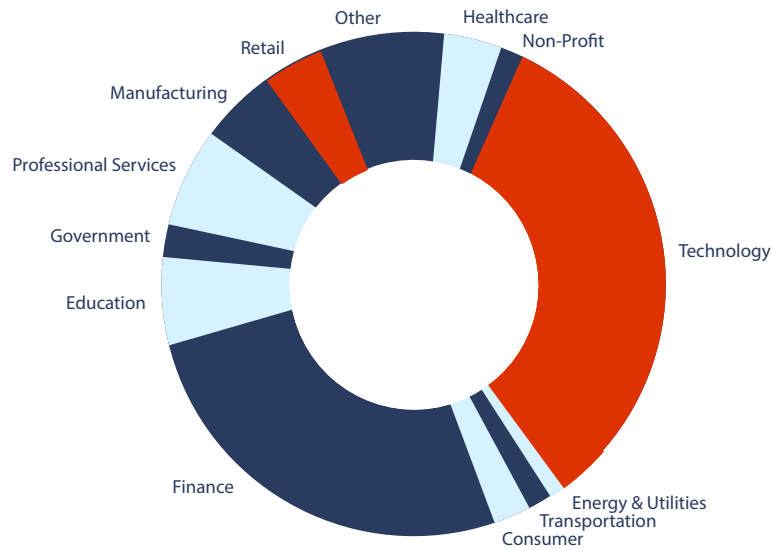
The verticals represented were slightly different for DevOps enabled organizations compared to the IT Generalists.



DevOps-Enabled Organizations:

What industry does your company belong to?

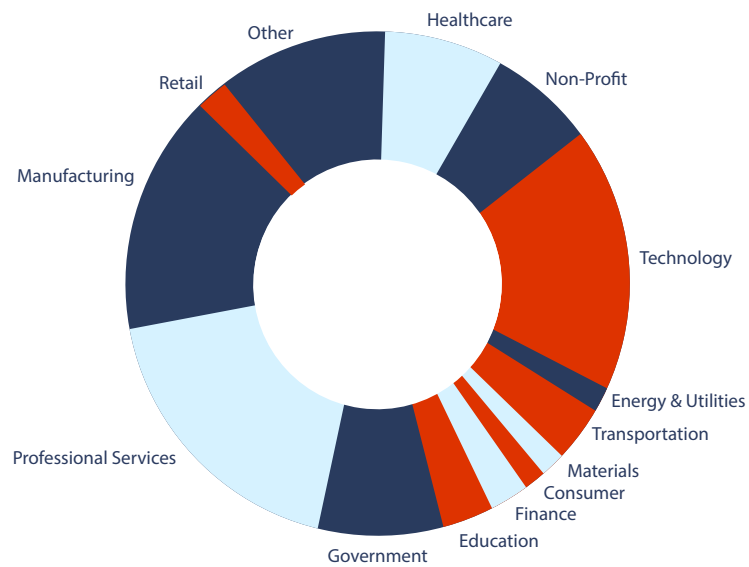
144 ANSWERS



IT Generalists:

What industry does your company belong to?

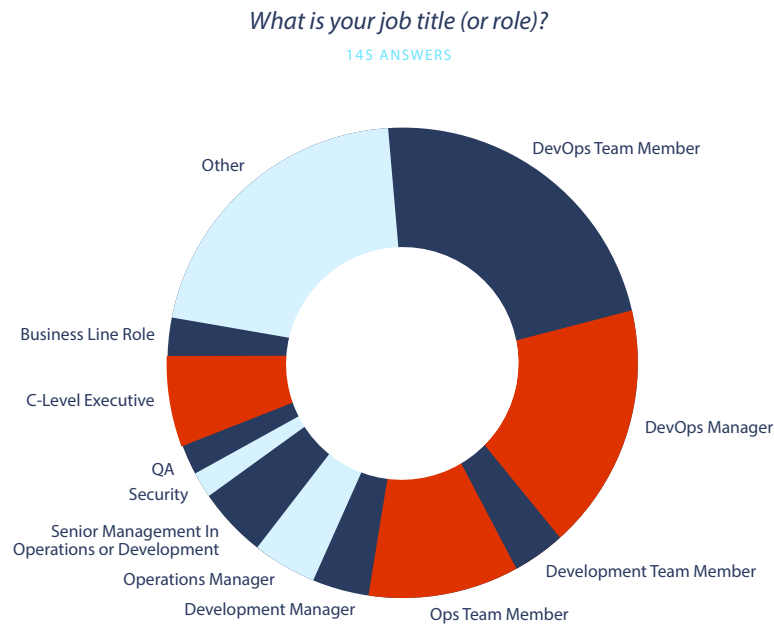
73 ANSWERS



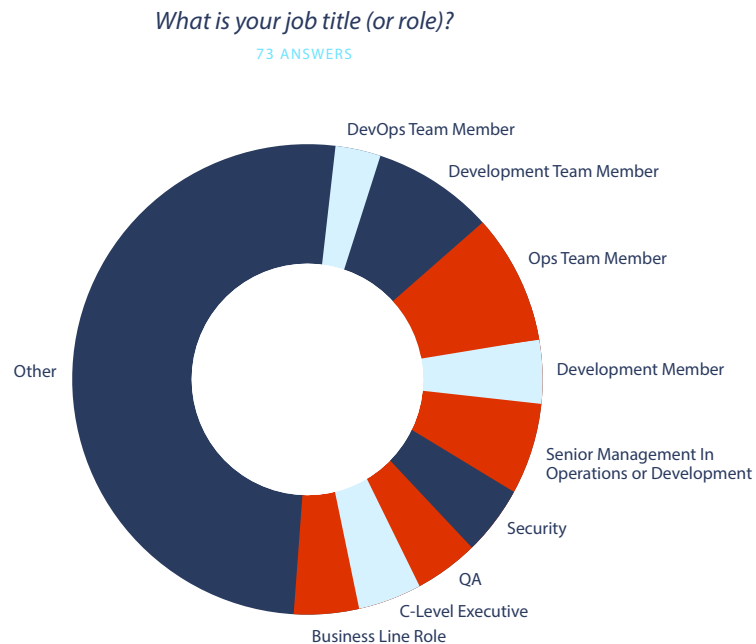
An interesting difference between the two groups is the large presence of the finance industry for the DevOps-enabled respondents.

The job titles of the respondents were, again, very different depending on if the respondent was part of a DevOps enabled organization.

For DevOps-Enabled Organizations:



For IT Generalists:



For the IT Generalists, the "Other" category had Software Analyst and Engineer as leading job titles.

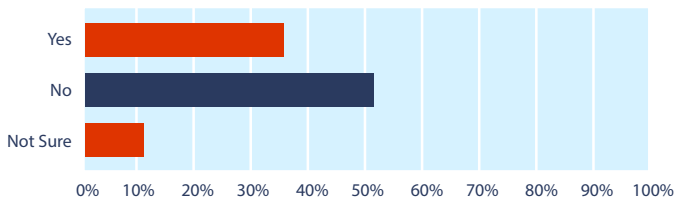
Development Tools Usage

The next groups of questions focused on the development tools used by an organization. Again, there was a noticeable difference between the DevOps shops versus traditionalists. More than 50 percent of DevOps shops said they do not standardize on the same tool.

In IT-Generalist organizations, the largest response was yes. In both types of organizations, there was a sizable minority who did not know.

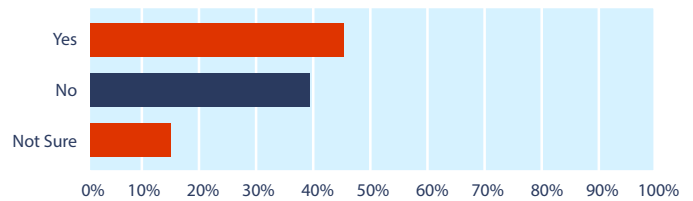
Do all of your company's development teams standardize on the same tools?

121 ANSWERS



Do all of your company's development teams standardize on the same tools?

73 ANSWERS



Organizational size became a huge factor when looking at exactly how many development tools the organization used. Across organizations of all sizes "5-10 tools" was the most popular response. However, when filtering by company size, large organizations used more than 20 tools by a wide margin.

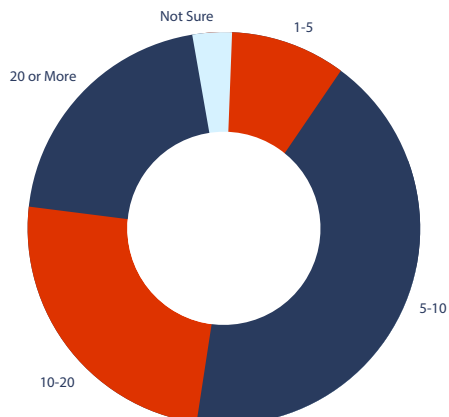
For large organizations, the picture is quite different:

How many development tools does your company currently use (i.e. Project, Issue, Tracking, Service Desk, Code Management, Deployment, etc.)?

39 ANSWERS

How many development tools does your company currently use (i.e. Project, Issue, Tracking, Service Desk, Code Management, Deployment, etc.)?

120 ANSWERS



How many development tools does your company currently use (i.e. Project, Issue, Tracking, Service Desk, Code Management, Deployment, etc.)?



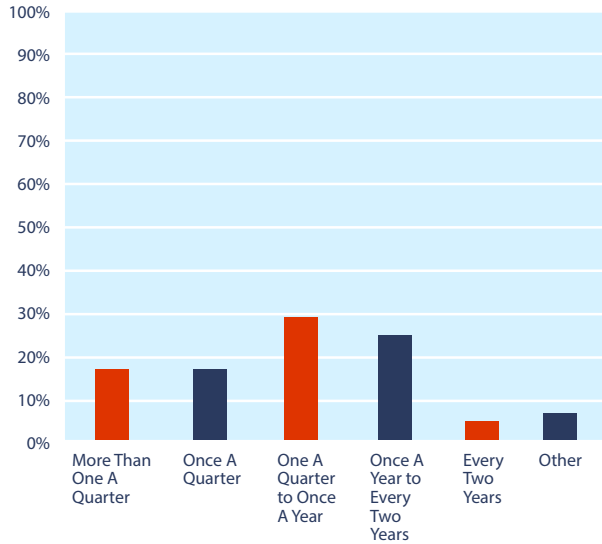
How often are new tools officially added to the stack?

This question resulted in some interesting responses. In particular, almost 35 percent of large organizations add tools at least yearly, while almost 30 percent of organizations as a whole add tools at least once a quarter.

Organizations as a Whole:

How often does your company add a new tool to the process?

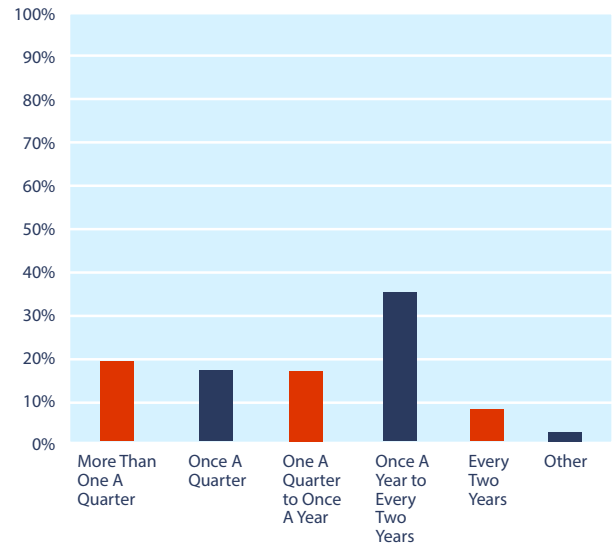
121 ANSWERS



Large Organizations:

How often does your company add a new tool to the process?

40 ANSWERS



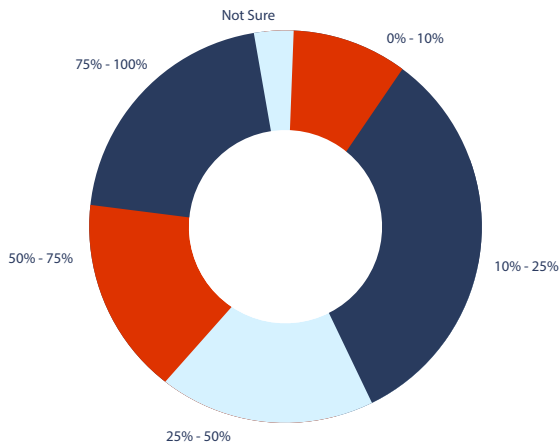
Open Source Tool Usage

Perhaps here more than any other question, we saw distinct differences between organizations of all sizes.

When asked what percentage of a company's development tool chain is open source, the responses were:

What percentage of your company's development tool chain are open source?

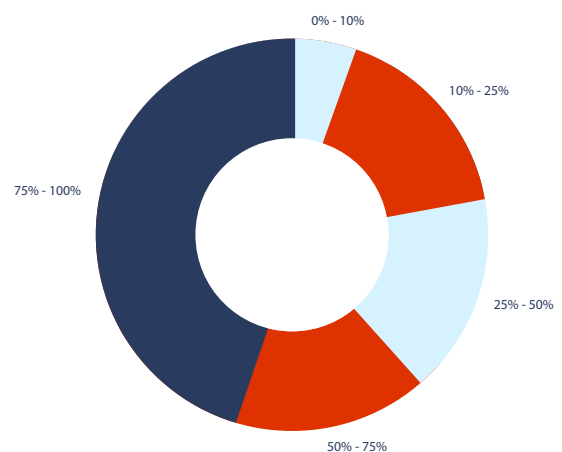
120 ANSWERS



Filtering by company size showed that, in organizations with fewer than 200 employees, there was a very different experience:

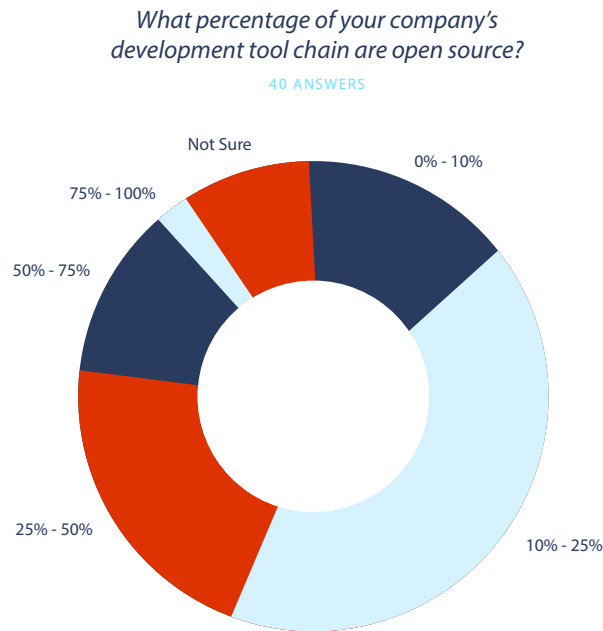
What percentage of your company's development tool chain are open source?

36 ANSWERS



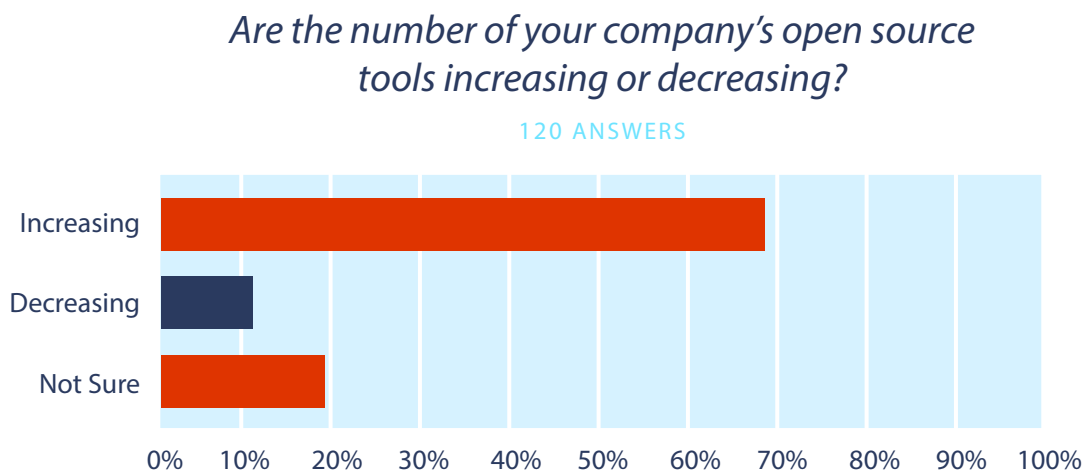
As can be seen, 75-100 percent of the tool chain is open source at the smaller organizations, with 50-75 percent being the next most popular answer.

However, when filtering to organizations of more than 5,000, the picture was indeed very different:



The larger the organization, the less open source made up their development tool chain.

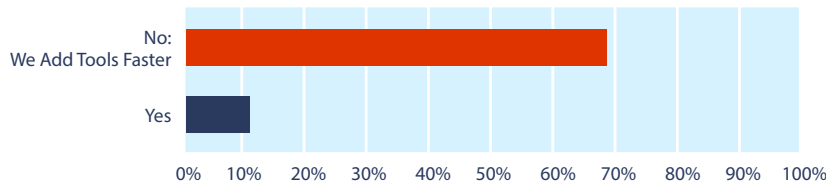
No matter the size of organization, though, open source use was seen as increasing:



Equally - if not more - overwhelming were the responses around the pace of retiring tools. By an overwhelming majority, the respondents indicated that development tools are not retired anywhere near as often as new tools are added. This, of course, bodes for even more tool sprawl in the future.

Does your company retire tools at the same rate as you add tools?

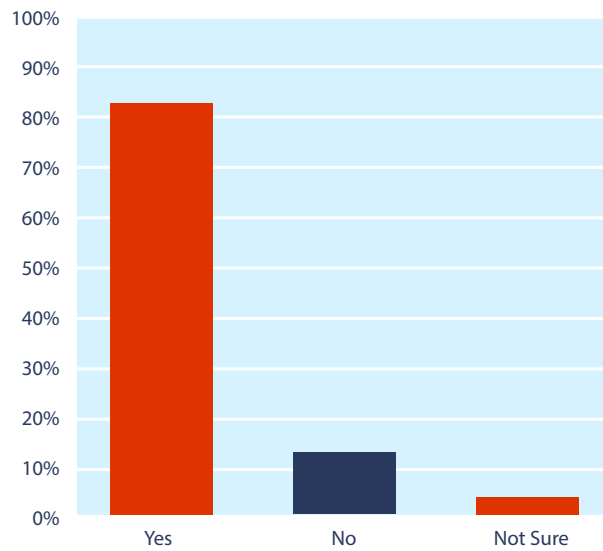
40 ANSWERS



When asked about the use of unauthorized tools, once again the respondents answered in unison regardless of demographic. More than 80 percent of respondents admitted use of unauthorized tools at their organization.

Have you or anyone on your team used tools that were not part of the organizations tool chain?

115 ANSWERS

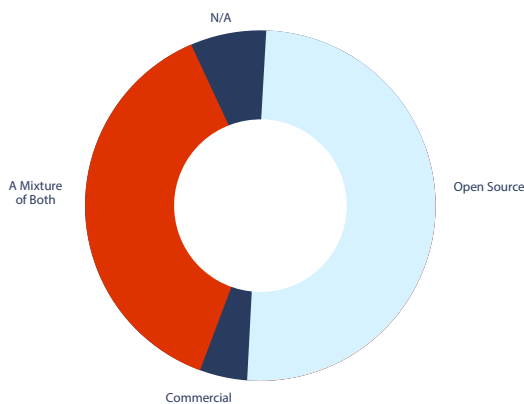


Those unauthorized tools are also usually open source. In fact, only a small percentage of organizations used only commercial unauthorized tools. The vast majority of unauthorized tool use was either exclusively open source or a mixture of both.

A tool that originally was unauthorized did not disqualify it from being added to a company's official tool chain. In fact, it seems that the addition of new tools via "the back door" is a common path to adoption.

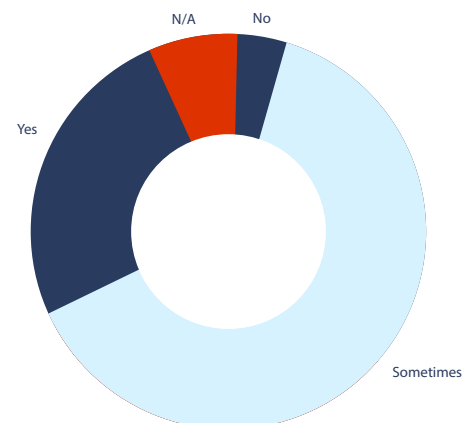
If tools were used that were not part of the organization's official tool chain, were they open source or commercial tools?

114 ANSWERS



Have any of these tools eventually been added to the company's official tool chain?

114 ANSWERS

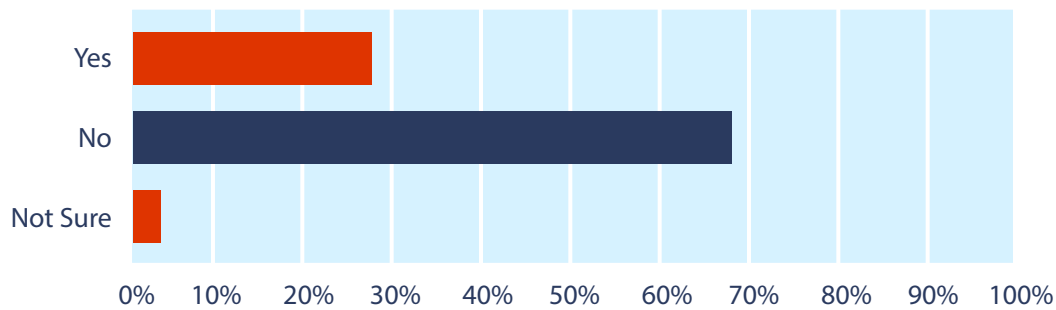


The next sections of the survey deal with development languages in use.

The first question asked whether the dev teams were standardized on the same language. A majority (almost 70 percent) answered “No.” Then again, the fact that they were also not standardized on the same tool would have led one to believe this was probably the case with development languages as well.

Do all of your development teams standardize on the same language?

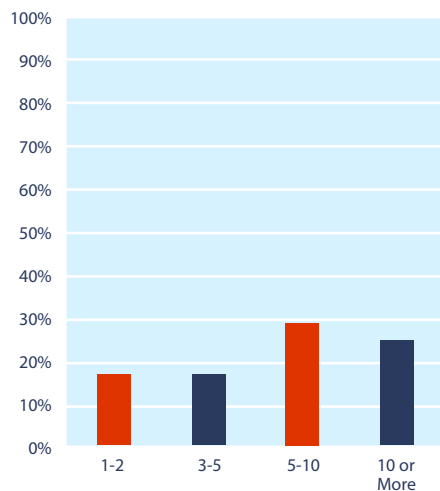
107 ANSWERS



If not standardized on the same language, how many languages did they standardize on? The sweet spot seems to be three to five, though a sizable minority use five to ten.

How many development languages does your company currently use (Java, .Net, Cobol, C++, Node.JS)?

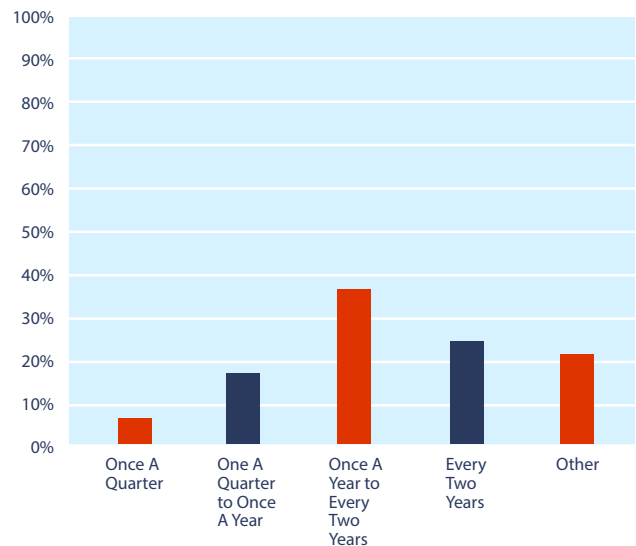
107 ANSWERS



When asked how often new development languages are officially added, though, the answer seemed to indicate a slower pace than the pace development tools were added.

How often does your company add a new language to the ecosystem?

107 ANSWERS

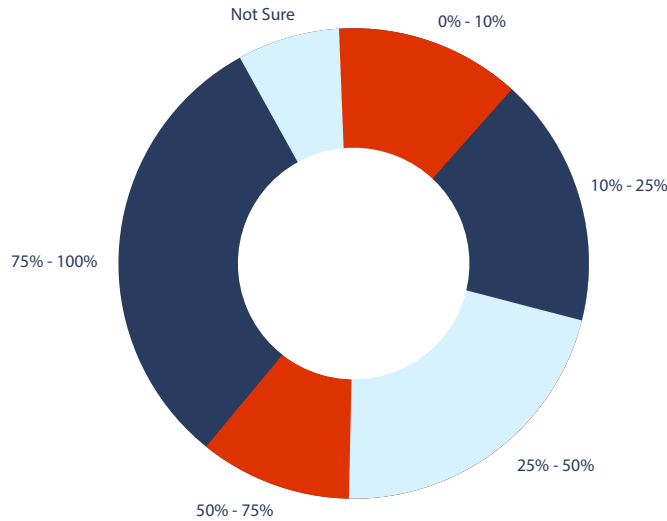


Once a year to every two years was the high-water mark for this question.

When it came to open source languages, again, there was a big disparity between large and small organizations. Over all, the largest percentage of responses indicated that 75-100 percent of new languages added are open source.

What percentage of your in-house applications are written in open source languages?

107 ANSWERS

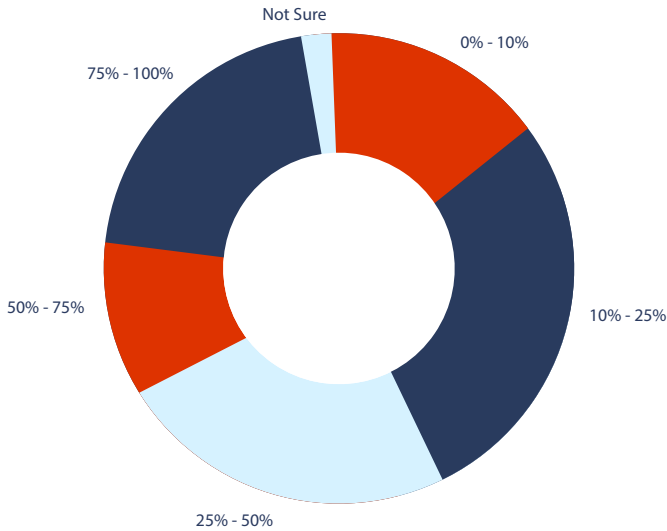


When looking at just larger organizations, though, once again we see open source making up a smaller percentage of languages used.

Regardless of organization size, though, once again the use of open source language is believed to be increasing as well.

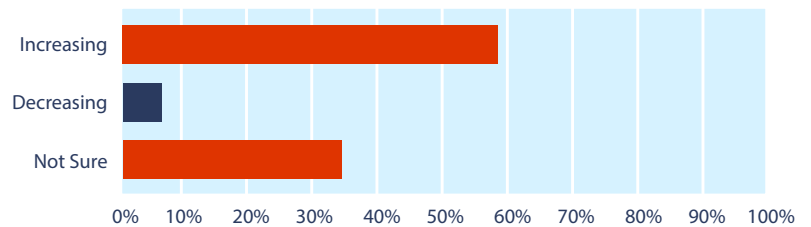
What percentage of your in-house applications are written in open source languages?

37 ANSWERS



Are the number of your company's open source languages increasing or decreasing?

107 ANSWERS



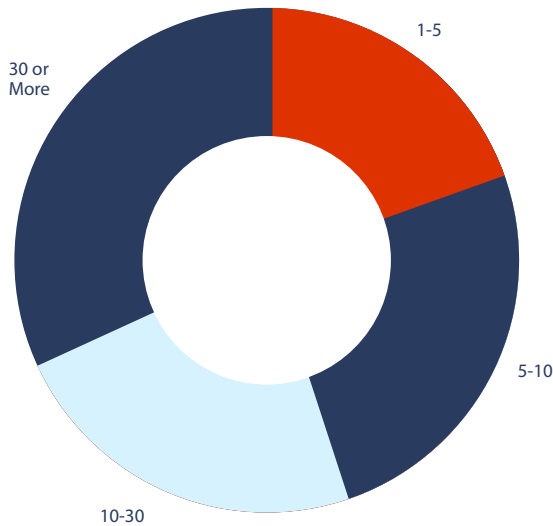
The final two sections of the survey asked how many apps are managed in-house and how often new code is deployed.

In terms of how many apps are managed in-house, as one would imagine, the larger organizations manage a larger portion of apps.

For organizations as a whole, the data showed:

How many in-house applications does your company currently manage?

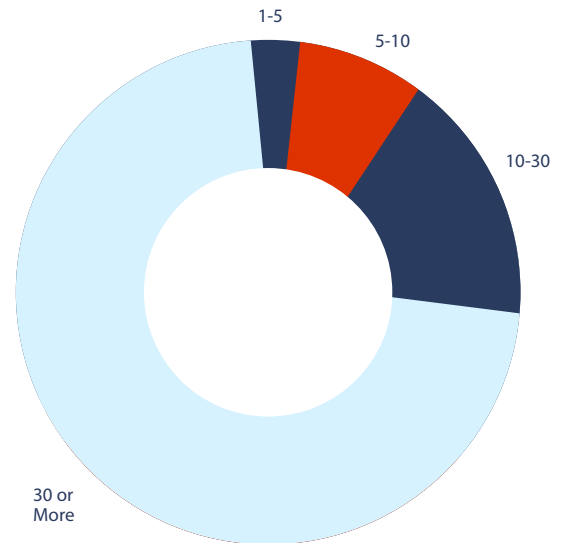
101 ANSWERS



For larger organizations, the data showed a different picture:

How many in-house applications does your company currently manage?

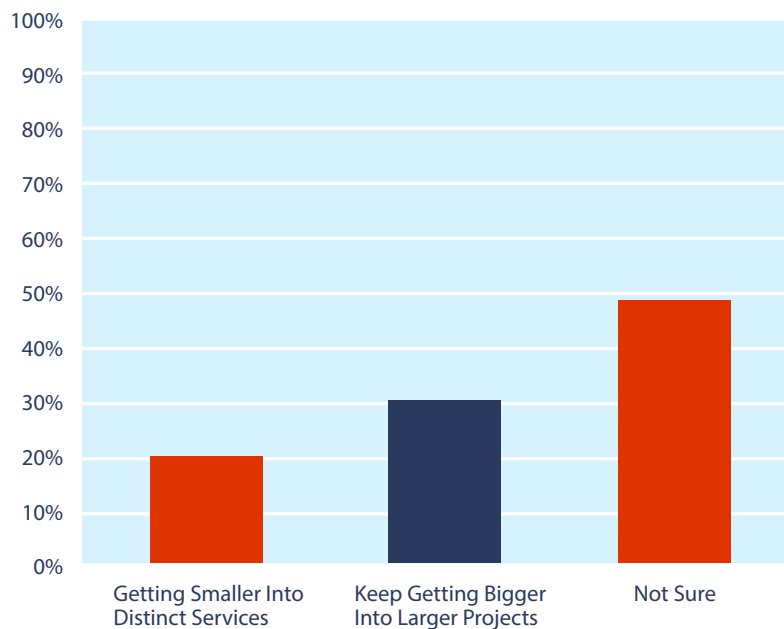
35 ANSWERS



No matter the size, though, there was broad agreement that in-house apps are increasing in number. When asked what direction there were going, respondents were not really sure.

What direction are your in-house applications going?

72 ANSWERS

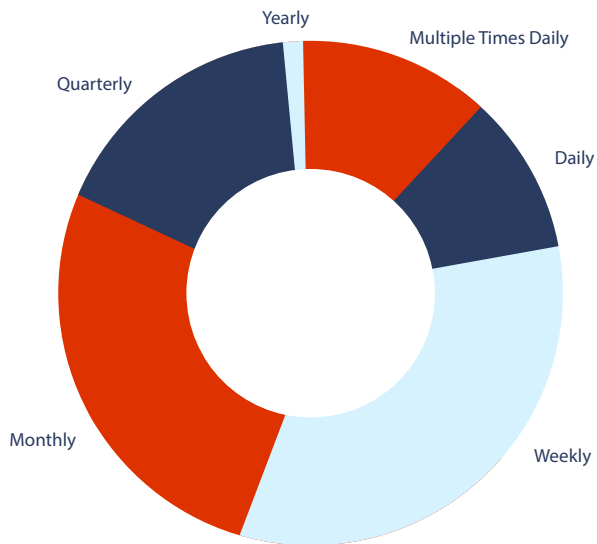


Finally, how often do you release new code and how often do you wish to release new code? Here again we returned to comparing DevOps-enabled organizations to IT Generalists.

DevOps-empowered organizations release code as follows:

On average how often does your company currently do production deployments?

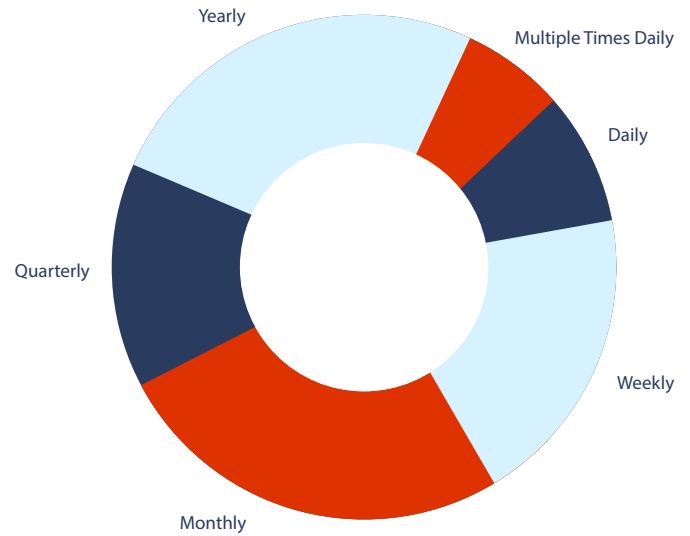
100 ANSWERS



IT Generalists release code less often:

On average how often does your company currently do production deployments?

70 ANSWERS

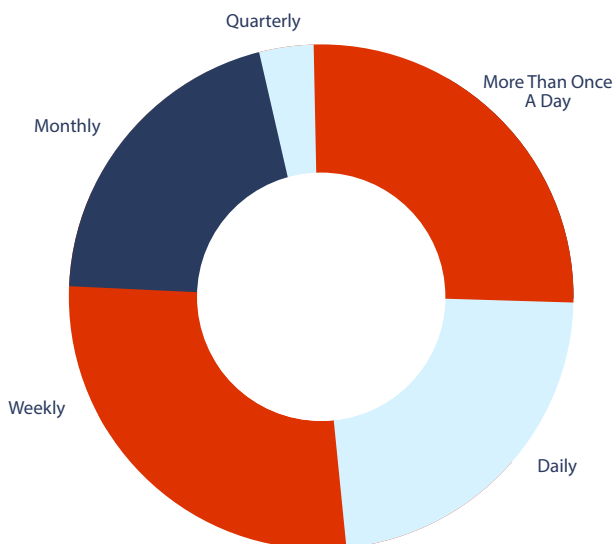


When asked how often they would like to release code, the differences between DevOps enthusiasts and IT generalists were even more pronounced.

Here are the wishes of the DevOps empowered group:

How often would your company LIKE to do production deployments?

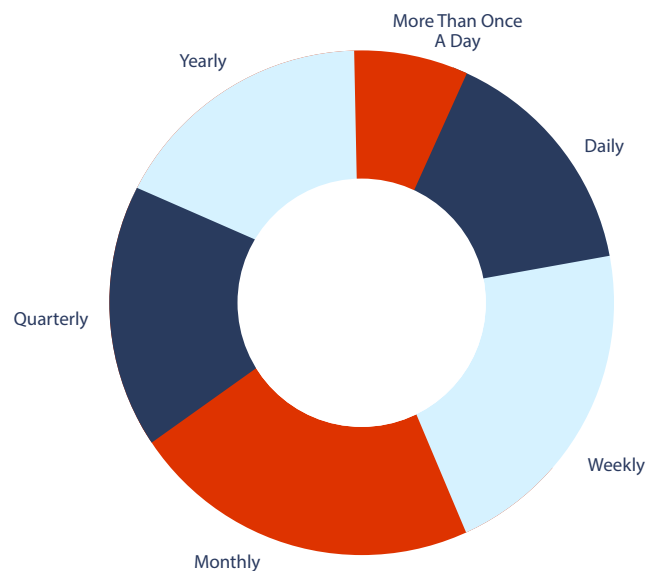
100 ANSWERS



IT Generalists wished for a very different release cadence:

How often would your company LIKE to do production deployments?

69 ANSWERS



Conclusion



The results of this survey present some very clear conclusions. Organizations are already under pressure to manage the sprawl of development tools. This sprawl is expected to not only continue but to grow even larger in the future. While open source tools have certainly made their mark across the entire spectrum of organizations, smaller organizations are much more likely to use open source for an overwhelming majority of their development tools and languages than large organizations.

The gulf between DevOps-empowered organizations and traditional IT Generalists continues to grow. As this pattern accelerates there will be wider and wider differences between the DevOps organizations outdelivering and outcompeting traditional IT shops.

Taken as a whole, regardless of whether a company is a DevOps-empowered organization, it is clear companies must embrace better management and insight into development tools and languages to achieve the full benefits of today's technology.

“Unlike any of its kind in the market, this new piece of research sought to uncover the complexity of IT sprawl and how it is affecting the adoption of DevOps initiatives across the globe. Given the current IT environment, we hypothesized that the rate of tools being added to enterprise tool chains is escalating at a pretty significant pace and our survey results confirm this theory. More and more tools are being added and the potential for escalating IT sprawl is highly likely.

Our conclusion is that these findings make a compelling case for the use of agnostic Application Release Automation (ARA) tools, such as Automic's Release Automation, which can be used in conjunction and integrated with all of the new open source technology in the market. IT teams, with Dev in particular, do not want to be tied to one toolset, and it is clear that the best way to engender the DevOps revolution is to allow the use of a diverse, but controlled, tool stack within your organization. Automic's ARA product lets teams do just that.”

- Chris Boorman, CMO

Automic