

Cloud Foundry User Survey

Semi-annual snapshot of Cloud Foundry users' deployments and productivity

CLOUDFOUNDRY

April 2018

Introduction

Cloud Foundry is the prevailing open source cloud application platform used by half of the Fortune 500 and a third of the Global 2000 to increase their developer productivity, saving them significant time and resources while making them more competitive in today's ever-evolving market. Cloud Foundry Foundation's biggest supporters—including Fujitsu, IBM, Pivotal, SAP and SUSE—donate code and projects back into Cloud Foundry, ensuring the technology continues to evolve at a rapid pace, keeping up with the expeditious changes in IT and cloud.

This report is the second Cloud Foundry User Survey, a series of semi-annual surveys conducted and produced by **ClearPath Strategies**, a technology- and politics-focused research and strategy firm. For more details on Methodology, see page 15.

Key findings from the survey include:

- 1 A GLOBAL, SCALABLE, BROADLY DEPLOYED PLATFORM:** Cloud Foundry Application Runtime is used globally, with 40 percent of users in North America and a growing user base in Europe. It is deployed broadly across industries, including IT (48 percent) and financial services (16 percent). More than half (61 percent) of all Cloud Foundry users are large enterprises (\$1+ billion annual revenue).
- 2 A MATURE AND EVOLVING PLATFORM:** One-third of user companies have at least 100 developers using Cloud Foundry. The number of user companies with more than 50 developers using Cloud Foundry rose from 20 percent to 47 percent in the last year, and companies with more than 50 applications on Cloud Foundry rose from 24 percent to 40 percent in just over six months. Nearly a third (30 percent) of user respondents describes their Cloud Foundry use as “broad” with a 12 point increase in both broad and limited adoption from last year. And it’s not slowing down: 53 percent of user respondents have been using the technology for fewer than two years.
- 3 A FLEXIBLE AND INTEROPERABLE TECHNOLOGY:** More than nine out of 10 Cloud Foundry users cite cross-platform flexibility as important, with 67 percent calling it “very important.” According to user respondents, 13 percent of Cloud Foundry Application Runtime (CFAR) users currently use Cloud Foundry Container Runtime (CFCR), which was launched after the 2017 User Report. Another 45 percent are evaluating CFCR, which is Kubernetes running on top of CF BOSH.
- 4 A PLATFORM DEVELOPERS LOVE:** A plurality (42 percent) of user respondents identify as developers or “devops” with the next largest share being architects (28 percent). These users have strongly favorable opinions toward Cloud Foundry, with 82 percent stating they would recommend Cloud Foundry to a coworker.
- 5 A PLATFORM COMPANIES LOVE:** More apps in less time. More than a third of Cloud Foundry users save a few months or more per application development cycle, and 10 percent report saving more than six months. How does that play out on the cost side? Nearly a quarter of Cloud Foundry users report saving \$500K per application development cycle—17 percent of whom save more than \$1 million. An “app a year” company transforms into an “app a week” company, and that has a compounding effect when it comes to saving time and money.
- 6 AN OPEN SOURCE VALUE-DRIVEN TECHNOLOGY:** Above all, Cloud Foundry users value open source for the flexibility, interoperability and diverse community offered by the technology and ecosystem.

Key Finding: A Global, Scalable, Broadly Deployed Platform

BROAD DEPLOYMENT ACROSS INDUSTRIES

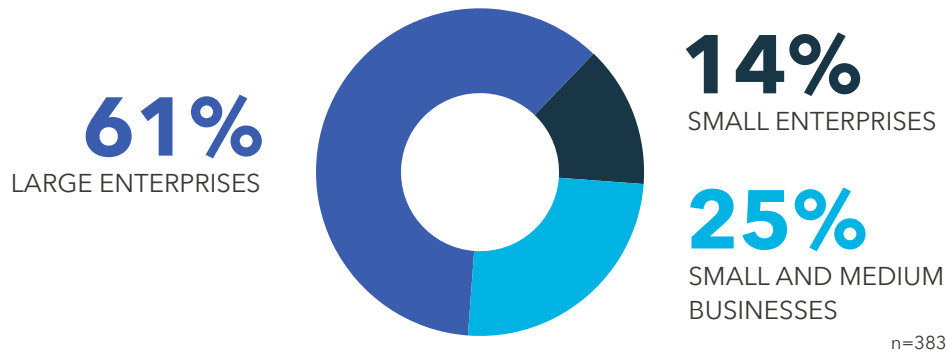
The respondents to the survey represent a broad and diverse collection of companies. These organizations span a variety of industries, including heavy concentrations in IT— hardware, software, services, etc.—(48 percent) and financial services (16 percent), followed by smaller distributions within transportation, telecommunications and other industries including healthcare, wholesale, education and government. These findings are consistent with the **2017 User Survey**, which also determined that IT and financial services were the most common users of Cloud Foundry. This is evidence of Cloud Foundry’s maturity as a platform, given the highly regulated nature of many of these industries, especially financial services and government.

IT	48%
Financial services	16%
Transportation and logistics	7%
Telecommunications	5%
Healthcare and pharmaceuticals	4%
Heavy industry	4%
Wholesale and retail	4%
Education	3%
Government	3%
Non-financial services	3%
Utilities	1%

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A SCALABLE PLATFORM

More than half (61 percent) of all Cloud Foundry users are large enterprises which generate over \$1 billion in annual revenue, a 12-point increase from our October 2017 report. A further 14 percent of Cloud Foundry user respondents come from smaller enterprises, which garner between \$100 million and \$1 billion annually. The remaining 25 percent of Cloud Foundry users are found in small and medium businesses, which generate less than \$100 million each year.



GLOBAL USAGE

Users responded to the survey from all over the world. While the majority of user respondents continue to come from North America, Cloud Foundry adoption is spreading globally. In last year's report, 53 percent of user respondents came from North America compared to 43 percent this year. This fluctuation reflects the proliferation of Cloud Foundry usage across the globe, especially in Europe. From 2017 to 2018, Cloud Foundry usage in Europe rose from 28 to 33 percent, with a notable spike in usage in Germany, which nearly doubled from seven to 13 percent. Asia represents another 17 percent of Cloud Foundry users, with Africa, the Middle East and Latin America rounding it out with six percent combined.

¹ This survey was shared globally but was not translated. The next iteration of the User Survey will be translated into Chinese and distributed in China, which may shift these numbers dramatically.

43%
North America

33%
Europe

17%
Asia-Pacific

<6%
Africa and
Middle East

<6%
Latin America

Key Finding: A Mature and Evolving Platform

BROAD IN-ORGANIZATION DEPLOYMENT

Global enterprises in every vertical use Cloud Foundry Application Runtime to develop, deploy and manage their cloud-native applications—and they’re deploying Cloud Foundry more broadly across their companies than ever before. Nearly a third (30 percent) of user respondents describes their Cloud Foundry use as “broad”—either rolling out or fully integrated across the whole company.

Cloud Foundry in production has shot up over the past year—the share of companies deploying it broadly has increased seven points and those moving beyond PoC and deploying in a limited way has risen five points. The evaluation period for many of these organizations is over, as they have tested, tried and chosen Cloud Foundry Application Runtime.

SUSTAINED MOMENTUM

Given the last year’s twelve point increase in adoption (both broad and limited), it’s unsurprising to note that most companies responding to the survey are relatively new to Cloud Foundry. A majority (53 percent) of Cloud Foundry user respondents has been using the platform for fewer than two years, while just over one in five users (22 percent) have been using the platform for more than three years. This highlights the sustained momentum in Cloud Foundry adoption—evaluation leads to adoption time and again.

Platform Usage



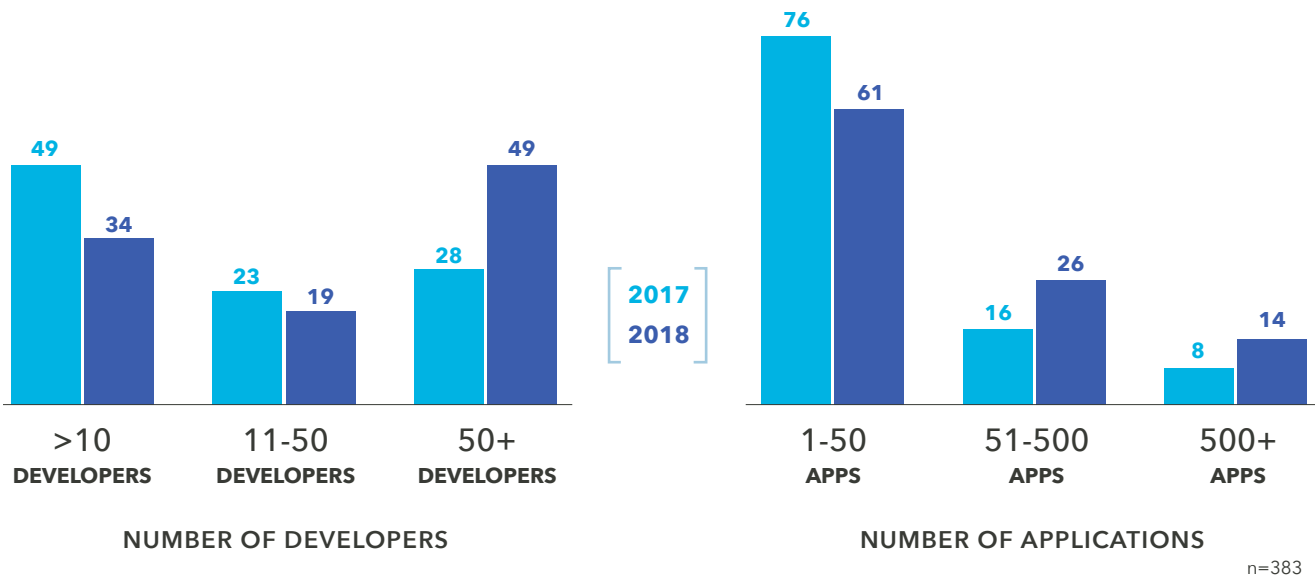
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In Production	30%	+7%
Limited Use	39%	+5%
Evaluation/POC	31%	-12%

DEPTH OF USAGE

The depth of Cloud Foundry usage is reflected in the dramatic increase in the number of Cloud Foundry developers at each responding company. Almost half (47 percent) of user companies have more than 50 developers working on Cloud Foundry—a 27 percent jump from the last survey. One-third of user companies have at least 100 developers using Cloud Foundry while two-thirds of users (66 percent) have at least 11 developers using Cloud Foundry.

More Developers & More Applications



47% of user companies have more than 50 developers working on Cloud Foundry—a 27% jump from the last survey.

Regardless of how many developers within a company are working on Cloud Foundry, the average time these developers spend using Cloud Foundry has increased from 38 percent of their time to 45 percent.

And that's not all: Companies are deploying more and more applications to Cloud Foundry. The share of companies with more than 50 applications on Cloud Foundry has increased from 24 percent to 40 percent in just over six months. The average share of applications deployed on Cloud Foundry has increased from 31 percent to 37 percent in that same span.

More than half of user respondents (52 percent) are migrating most applications to a Cloud Foundry platform, and 31 percent are planning to or considering migration.

*Companies with more than 50 applications on Cloud Foundry rose from 24% to 40% in just **over six months.***



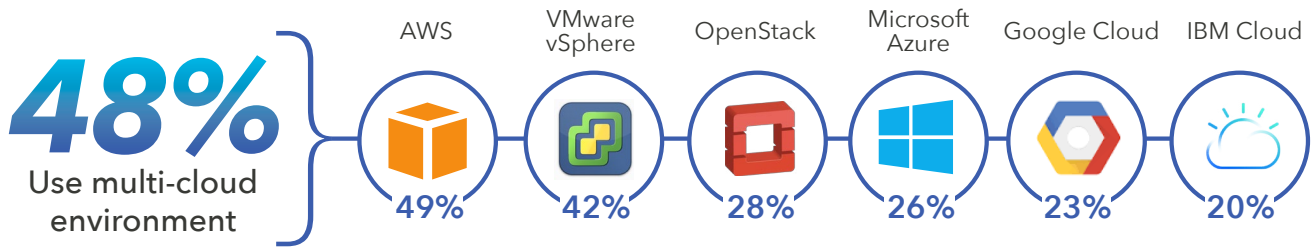
Key Finding: A Flexible and Interoperable Technology

FREEDOM TO CHOOSE

Developers choose Cloud Foundry because it is flexible, scalable and offers incomparable interoperability. Cloud Foundry can be used with a preferred language, framework, platform or cloud. This flexibility is crucial to the multi-cloud and hybrid cloud world we live in. It gives developers freedom of choice—and freedom to create.

Nearly half (48 percent) of respondents report operating in a **multi-cloud** environment. This is slightly lower than in 2017 by five points.

Cloud Foundry Application Runtime in Multi-Cloud



Cloud Foundry users also tend to operate in hybrid cloud environments. A majority (61 percent) use on-prem private cloud, 41 percent use off-prem public cloud and 19 percent use off-prem private cloud, for a total of 122 percent, proving there is overlap among cloud environment use.




Unsurprisingly, Cloud Foundry's cross-platform flexibility is very important to its users. 92 percent of users say that cross-platform flexibility is important to them, including 67 percent who say it is very important. This is a slight increase over 2017 when 90 percent said it was important and 60 percent said very important. Flexibility remains a key driver for Cloud Foundry users, regardless of industry or geography.

INTEROPERABILITY RULES

As the pace of change in IT increases, Cloud Foundry's flexibility provides insurance to its users against missing out on the latest technology trends. The growth of **containers** and Kubernetes is one example. **Cloud Foundry Container Runtime** (CFCR) is built using Kubernetes and **Cloud Foundry BOSH**, and was initiated by engineers at Google and Pivotal who understood the need for interoperability among technologies. According to user respondents, 13 percent of **Cloud Foundry Application Runtime** (CFAR) users currently use Cloud Foundry Container Runtime, which was launched after the 2017 User Report. Another 45 percent are evaluating CFCR. Overall, 34 percent of Cloud Foundry Application Runtime users report using Kubernetes (including other methods for installation and operation), with another 44 percent evaluating or deploying Kubernetes.

92% of Cloud Foundry users cite cross-platform flexibility as important, with 67% calling it "very important."



Key Finding: A Platform Developers Love

WHO KNOWS (AND LOVES) CLOUD FOUNDRY?

Cloud Foundry Application Runtime is a developer platform, first and foremost. A plurality (42 percent) of user respondents identify as developers or “DevOps.” The next largest share is architects (28 percent), who continue to play a larger role than managers, CIOs and CTOs (16 percent) and operators (seven percent).



Cloud Foundry Application Runtime Users

42%

Developers
+ DevOps

28%

Architects

16%

Managers,
CIOs and other
executives

7%

Operators

7%

Other

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User respondents have strongly favorable opinions toward Cloud Foundry. On par with 2017, 82 percent of users give Cloud Foundry a favorable rating on a 0-10 scale.

To use Cloud Foundry is to love Cloud Foundry: 82% of user respondents give Cloud Foundry a favorable rating.

Key Finding: A Platform Companies Love

CLOUD FOUNDRY SAVES TIME

Companies using Cloud Foundry report significant increases in developer productivity. As we saw in the 2017 User Survey, application development cycles fell from months to weeks or even days with Cloud Foundry usage. More than a third (36 percent) of user respondents report saving a few months or more per application development cycle, and as many as 10 percent save six months or more. The average user respondent reports saving approximately 10 weeks per application development cycle.

Time Saved with Cloud Foundry



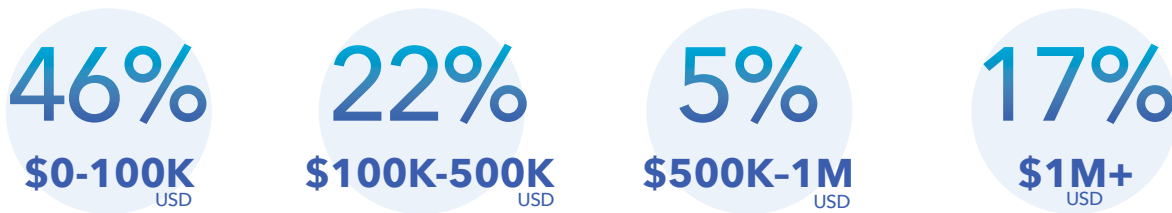
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More than a third of Cloud Foundry users save at least a few months per application development cycle, and 10% of users save more than six months per cycle.

...AND MONEY

These companies are not only saving time from development to deployment, but money. Nearly a quarter (22 percent) of respondents report saving \$500K or more per application development cycle, most of whom (17 percent of the total) report saving \$1 million or more. In all, 46 percent report saving at least \$100K per application development cycle. This adds up to real money and real business results. What was once an “app a year” company can now be an “app a week” company. This velocity means an application development cycle creates real value on an ever-increasing basis.

Money Saved with Cloud Foundry



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Nearly half of Cloud Foundry users report saving \$100K per application development cycle.

Key Finding: An Open Source Value-Driven Technology

CONCLUSION

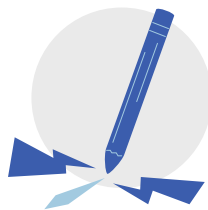
Regardless of industry or business size, whether there are 10 or 100 developers at a company using Cloud Foundry, and no matter which cloud or language is being used, one thing is certain: Cloud Foundry users value the freedom of open source.

In a series of questions about the value of open source, user respondents highlighted flexibility, interoperability and a diverse community as the top three benefits of open source. Nearly thirty percent of respondents felt that open source enables developers to tap into a trustworthy community of diverse minds who have come together to tackle a multitude of challenges. Cloud Foundry is indeed a community comprised of diverse individuals who encourage innovative thinking and collaboration across demographics.

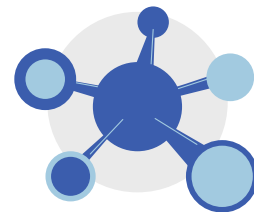
For Cloud Foundry users, open source is about choice and freedom—from vendor lock-in, to choose your development and infrastructure environments, and to adapt to the next technology trend without worrying whether you will be able to take advantage of it. As the pace of technology change accelerates, this flexibility to integrate with both the technologies of today and tomorrow will only become more important.



AVOID VENDOR LOCK-IN



FREEDOM TO CREATE



DIVERSE COMMUNITY

Cloud Foundry users' top three reasons for choosing open source are Flexibility, Interoperability and Diverse Community.

Methodology

The 2018 2H Cloud Foundry User Survey is the second in a series of semi-annual surveys conducted and produced by ClearPath Strategies, a strategic consulting and research firm for the world's leaders and progressive forces.

In total, 609 respondents completed the survey online from February 6-28, 2018. Respondents were invited to participate via Cloud Foundry Foundation emails, newsletters, Twitter, website and Slack channels, as well as direct invitation from certified platform providers and other members. Of the total respondents, 383 can be identified as "users." Though companies who distribute commercial versions of Cloud Foundry could also be considered "users," we exclude them from the analysis of this survey. Numbers may not add to 100 percent due to rounding, or for multi-response questions. Respondents whose questionnaires were substantially incomplete have been excluded from these results. In instances where respondents completed most of the survey, their responses were included. Where they left a question blank, they have been excluded from those specific questions for the purpose of analysis. The Cloud Foundry User Survey outreach and survey were drafted and delivered in English across all geographies.

