
Cloud Foundry Foundation

Annual Report 2017

January 2018



CLOUD **F**OUNDRY

Introduction

2017 was the year the Cloud Foundry Foundation found its stride. With a technology that is the standard for enterprises building cloud-native applications worldwide, the clear question for the Foundation at the start of the year was *What next?* Thankfully, technology never sleeps. With the need for more than one way to solve complex problems, the Foundation launched Cloud Foundry Container Runtime (CFCR), the first in a series of Kubernetes-related projects to live alongside Cloud Foundry Application Runtime (CFAR), previously Elastic Runtime. This sea change in technology approach, alongside two major Summits, the launch of Certified Developer training, and a renewed focus on end users and community framed 2017 as a year of important transition for Cloud Foundry, both as a technology and as a Foundation.

2017 Highlights

COMMUNITY

- **Membership:** We ended the year with 61 members.
- **Foundation Growth:** The Foundation has grown, on average, two new members each month, since its founding on January 21, 2015. In 2017, eleven new members joined and one member upgraded from Silver to Gold.
- **End Users:** The Cloud Foundry user community grew to more than 70,000 members spanning 200 self-organized local groups. Growing and supporting our community will be a major focus for the Foundation team in 2018.
- **Developer Training and Certification:** In June 2017, the Foundation released both the Cloud Foundry Certified Developer exam, as well as an associated training program that includes an edX MOOC course and a four-day paid “Cloud Foundry for Developers” course, in both e-learning and instructor-led versions. Over 12,000 developers have accessed the Foundation’s training and certification materials.
- **Diversity and Inclusivity:** The Foundation committed to advancing the diversity of our community in 2017.
 - This took the form of a Junior Ambassador program at Cloud Foundry Summit Silicon Valley, which enabled aspiring girls in STEM to attend Summit on scholarship, participate in the Diversity Luncheon and meet with Abby Kearns. Furthermore, the Foundation held two Diversity Panels in North America and Europe at those respective Summits, and provided Diversity Scholarships to attendees at both events.
 - The Foundation began tracking the gender identity breakdown of its events and will use this data to measure our progress in the future. More than half the keynote speakers on stage at Summit Silicon Valley were women.
- **Staff:** In 2017, Swarna Podila joined the Foundation as Senior Director of Community, while Paige O’Connor came on as Group Administrator. Devin Davis was promoted to VP of Marketing; Caitlyn O’Connell was promoted to Marketing Communications Manager; and Michelle McManus was promoted to Member Relations Manager.

ECOSYSTEM

- **Technology:** The Cloud Foundry technical community continued to harden the core Cloud Foundry Application Runtime and BOSH projects, while at the same time launching a series of innovative new projects and proposals.

- **Research:** ClearPath Strategies continued to provide deep dive analysis on industry awareness and adoption of Cloud Foundry, and insights into current industry trends, like containers and Kubernetes. The Foundation published four reports in 2017 based on quantitative and qualitative research provided by ClearPath.

AWARENESS

- **Content:** 2017 was the year of content at the Foundation. We continued to build out messaging documents and marketing materials for use by members and the Foundation, and ramped up production on content for the blog, user story program, white papers, contributed articles, videos and research reports. This content established the Foundation as a thought leader in the industry and is publicly available to all of our members.
- **Media & Analyst Awareness:** There was a significant increase in mentions of Cloud Foundry in global analyst research in 2017. The Foundation was mentioned more than 230 times in global reports, and analysts sought out the opinion of Abby Kearns and the Foundation on industry trends and topics. Additionally, the Foundation began a campaign of media relations in Europe, particularly in the UK, France and Germany, which resulted in more overseas coverage during the EU Summit and throughout the year. Overall, media coverage of Cloud Foundry increased 70 percent year over year from 2016 to 2017, as end user adoption also accelerated. News mentions of Cloud Foundry Foundation increased by more than 50 percent.
- **Social Media & Online Growth:** Cloud Foundry garnered nearly 85,000 followers on Twitter alone in 2017, up almost 8,000 since the previous year. Social channels produced more than 77M impressions all together, driving a huge amount of engagement and visibility among influencers.
- **Cloud Foundry Summits:** With the support of our members, the Foundation executed two highly successful summits in Santa Clara and Basel, selling out registration and increasing attendance from 2016 at both events—with a nearly 25 percent increase in Europe.

Business Development

- **Cloud Foundry Summit Results:** Total revenue for Summits were posted at \$2.75M for 2017. Cloud Foundry Summit Silicon Valley total revenue came in at \$1.75M and Cloud Foundry Summit EU total revenue came in at \$1M. Combined, these events ended up being net positive. In a year with event overload in the tech industry Cloud Foundry Summit Silicon Valley 2017 registrations increased from 1,609 to 1,654, and the Cloud Foundry Summit EU registrations increased from 707 to 858. We hosted our first User Day at Silicon Valley Summit, with over 100 attendees participating in the event. Additionally, we launched our Hackathon program with 50 attendees (sold out!) at Silicon Valley. European Summit yielded smaller crowds at 30 and 10, respectively.
- **New members:** In 2017, eleven companies joined the Foundation as members. We added six new Silver Members (Codenvy, comSysto, InfluxDB, Minio, Orange, Snyk) and five new Gold Members (American Airlines, Ford, Google, The Home Depot, and Microsoft). Volkswagen upgraded membership from Silver to Gold.
- **Gold Member Tier Expansion:** During the December 2017 Board Meeting, the Board of Directors approved the addition of nine Gold memberships. This addition creates space for more members to join at a higher level. This expansion will allow for an increased member base at the mid-tier, ensuring sustainability for the project.
- **Cloud Foundry PaaS Certification:** The Cloud Foundry PaaS Certification program had seven distributions achieve the 2017 certification: Atos Cloud Foundry, Fujitsu Cloud Service K5, Huawei FusionStage, IBM Cloud Foundry, Pivotal Cloud Foundry, SAP Cloud Platform and SwissCom Application Cloud.
 - The major technical changes from 2016 to 2017 included a reduction in the age of the Cloud Foundry release used in the certified offerings from 12 to six months and the requirement that the certified offerings use the Diego backend architecture (which coincided with the end of life of the DEA architecture).
 - 2018 requirements were issued the week of January 22, 2018, and we expect to exceed the number of 2017 certifications in 2018.

KEY LESSONS FROM 2017

- As we enter into our fourth year, we expect to see our community, ecosystem and projects evolve. We need to adjust our membership services and benefits to adapt to new member needs, while maintaining growth of the overall ecosystem.

- The expansion of the Gold membership tier provides an opportunity to enhance the overall makeup of the Board of Directors. Additionally, by expanding the Gold membership tier, we have opened the door for end user companies to participate at a higher level, with less financial contribution.
- A focus on new member benefits will allow us to improve member satisfaction and retention. We should increase our attention to Silver and Gold members as we contemplate new or expanded member benefits. Helping potential members realize the value proposition Cloud Foundry offers to a growing member base across a wide variety of industries - including startups, large System Integrators, as well as a growing number of end users that are using Cloud Foundry to digitize their businesses.
- North America and Europe based companies remain the biggest contributors to membership. However, APAC offers a breadth of companies that are both end users as well as providers.

AREAS FOR IMPROVEMENT IN 2018

- Increase our focus on the Asia Pacific region.
- Continued focus on expanding the Silver Membership tier.
- Combined sales efforts with other projects within the Linux Foundation.
- Enhanced sponsorship sales efforts, with the addition of Kimberly Andrews, Linux Foundation Events Partnership Manager.
- Update content and collateral to support membership sales efforts including:
 - Memberships Sales Decks (Platinum, Gold and Silver)
 - Membership Prospectus
 - New member onboarding package

MAJOR TECHNICAL DEVELOPMENTS

It is impossible to summarize all the work of the Cloud Foundry technical community. The last year brought major improvements to the core platforms and increased collaboration on innovative new ideas. Here are a few of the highlights.

CLOUD FOUNDRY APPLICATION RUNTIME

The Cloud Foundry Application Runtime (formerly known as the “Elastic Runtime”) underwent a significant period of technical maturation and hardening throughout 2016 and early 2017. Since that time, the community continues to keep stability, security and performance as top priorities, but has accelerated the evolution of the platform’s architecture and developer-centric features.

As an example of the efforts surrounding CFAR hardening, the routing team spent significant time and effort focused on the performance of the routing tier of the platform. While these efforts were started in late 2016, the team shared some impressive results (as well as their detailed methodology for how they approached performance tuning) in **April of this year**.

The Diego and Garden teams continue to evolve the underlying container management layer of the architecture. The Diego team, in particular, is planning to cut v2.0 of diego-release soon (with a set of breaking changes from the v1.x version series). At the Garden layer, we have seen features like root-less containers and an updated approach to file system management at the cell level.

Additionally, both the Container to Container Networking (C2C) and the Diego Persistence (Perci) projects were promoted from incubating to active projects within the Runtime PMC.

Several new project teams focused on CFAR features and components were also introduced in 2017, including the Cloud Foundry Permissions and Cloud Foundry Service API project teams. The Cloud Foundry Permissions team is focused on more granular RBAC capabilities within the CFAR control plane. The Cloud Foundry Services API project is a reconstitution of the past “Service Broker API” project from 2015, with the explicit goal of being the team responsible for implementing new features and capabilities designed into the Open Service Broker API specification.

Lastly, the long process of transitioning from cf-release as the focus of CFAR coordinated releases is completing on January 31, 2018, with the deprecation of cf-release entirely. The cf-deployment repository will now be the nexus of CFAR coordinated releases. This milestone represents the culmination of a massive effort to allow more loose coupling of release cadence for CFAR architectural components.

BOSH

The BOSH project celebrated five years as a platform in April 2017 with the usual ongoing array of new features and capabilities. Additionally, the BOSH CLI v2 is now generally available.

A few of the more interesting BOSH platform features released in 2017 include:

- Generic config functionality introducing new bosh configs command and consolidated configs API (<http://bosh.io/docs/configs>)
- Randomized selection of AZ selection
- Initial IPv6 networking support (manual)
- Colocation of errand jobs
- BOSH DNS service
- Integrations to support both the BOSH Backup and Restore and CredHub projects (more on those projects in the discussion of Extension projects)

OPEN SERVICE BROKER API

The Open Service Broker API (OSBAPI) project has continued to evolve since its launch in 2016. The project team was proud to announce the first release of the Open Service Broker API as a standalone specification during Cloud Foundry Summit Silicon Valley in June 2017. The API's **version 2.12** was focused on removing Cloud Foundry-specific implementation details, opening up easier adoption of the API by other platforms and ecosystems.

In September 2017, the project released **version 2.13** of the API specification, adding new features and capabilities:

- Schemas for configuration parameters
- Support for alternative authentication / authorization mechanisms beyond the prior HTTP Basic Auth support

Since then, the project has continued to work towards its next release, v2.14, which is expected in early 2018.

Adoption of the OSBAPI has continued to grow, with a notable achievement being the implementation of the API within Kubernetes via the Kubernetes Service Catalog effort in that community. We have also seen the rise of OSBAPI compliant service brokers from several major cloud providers, opening up their services to be more easily consumed by users running in any application or container platform that supports OSBAPI.

EXTENSION PROJECTS

In late 2016, the Extensions PMC was established to help foster cross company collaboration on projects outside the core Cloud Foundry Application Runtime and BOSH platforms. Since that time, the number of projects in that PMC has grown to 15, with additional proposals in progress for incubation.

Notable additions to the PMC include:

- Cloud Foundry Container Runtime (previously known as “Kubo”): A BOSH release of Kubernetes, designed to allow BOSH to deploy, manage, upgrade and support Kubernetes clusters.
- CredHub: A service for credential management and storage.
- Service Fabrik: A service broker designed to manage a variety of underlying service types, including provisioning support for service instances using BOSH, Docker Swarm or potentially other provisioning systems.
- BOSH Backup and Restore (BBR): A utility for orchestrating the backup and restore of BOSH deployments and BOSH directors.
- CF Local: A CF CLI plugin designed to use Docker to support a CF-like local developer experience, as well as working in conjunction with remote CFAR clusters.
- Stratos-UI: A web-based UI to interact with a CFAR Cloud Controller. Useful for operators and distributors alike.

The Cloud Foundry Abacus project, a metering system for CFAR, was also proud to announce its v1.0.0 release in September 2017.

EMBRACING A WIDER ECOSYSTEM WITHIN THE CORE CLOUD FOUNDRY ARCHITECTURE

In addition to the ongoing work of the Cloud Foundry Application Runtime project teams to evolve and maintain the CFAR, several initiatives have started around deeper collaboration and integration with other open source projects and communities. Most of these efforts are presently in the proposal stage. Nevertheless, this is an exciting direction for the Cloud Foundry technical community.

The routing team has begun working towards a **redesign of the CFAR routing tier**, including the potential integration of Istio Pilot and Envoy Proxy.

The Cloud Foundry Technical Advisory Board convened a working group to evaluate integration scenarios between CFAR and Kubernetes, beyond the work of the Cloud Foundry Container Runtime project's efforts. That effort resulted in three initial proposals that have been shared with the broader technical community for review and comment:

- **Cloud Foundry/Kubernetes Integration Scenarios**
- **Cloud Foundry Orchestrator Provider Interface**
- **Containerizing Cloud Foundry**

Expect to see project teams form in early 2018 around these proposals.

COMMUNITY MANAGEMENT

Community engagement, development and support are core focuses as we move into 2018. Deepening the strong community we've built in the past few years will enable us to lead cross-community collaboration and promote interoperability with other technologies. We will champion Cloud Foundry across open source communities, using Meetups, Cloud Foundry Ambassadors, Cloud Foundry Days, and Cloud Foundry Summits as vehicles to achieve community engagement.

MEETUPS

Cloud Foundry was represented at ~200 Meetups with nearly 70,000 registered individuals. This represents healthy growth year over year. We expect to see these numbers grow in 2018 as well as the programs that support Meetup organizers as they grow their communities and provide periodic content support. Meetups are an excellent medium for organizations in our wider community to engage in deeper conversation about Cloud Foundry around the globe.

AMBASSADOR PROGRAM

In 2016, we launched the Ambassador program, comprised of Cloud Foundry experts and volunteers, to help facilitate onboarding, evangelize Cloud Foundry technology, and execute strategy for technical and community evolution. In 2018, we will work closely with the Ambassadors to implement lessons learned in 2017 and to continue to improve and refine the program.

HACKATHONS FOR INNOVATIVE IDEAS

In 2017, we launched our first two Cloud Foundry Hackathons at the North American and European Summits. Both Hackathons consisted of a two-day sprint to build a new feature or bit of functionality to the Cloud Foundry platform and yielded some very interesting projects.

At the Hackathon at Cloud Foundry Summit Silicon Valley, the first place team devised an approach to implementing serverless architecture in Cloud Foundry “done right.” At Cloud Foundry Summit EU, the first place team built a “Software as a Service” service broker which supported sharing apps as a service via the Cloud Foundry Marketplace. Other topics included pre-compiling BOSH releases as a service, automating BOSH release creation from Debian packages, and providing a buildpack discovery service across multiple organizations.

The Foundation is currently planning the next Hackathon at Cloud Foundry Summit in Boston.

DEVELOPER CERTIFICATION AND TRAINING

In mid-2017, the Foundation launched the Cloud Foundry Certified Developer (CFCD) program, as well as a modest training program of associated content. The CFCD exam is somewhat novel in its focus on performance-based testing, in which participants actually perform Cloud Foundry operations in a live setup then are graded for their work, and also for its coding questions, in which participants modify and deploy code in various languages to complete exam questions. During early 2017, the Cloud Foundry Foundation partnered closely with the Linux Foundation to develop and beta test the exam, and the exam became generally available at the Cloud Foundry Summit Silicon Valley in June.

At the same time, the Foundation released the four-day Cloud Foundry for Developers Course, as well as the edX based online MOOC called “Introduction to Cloud Foundry and Cloud-Native Software Architecture.” The four-day course aligns closely with the CFCD exam, and is available

in an e-learning format hosted by the Linux Foundation, as well as an instructor-led version that is licensed by the Cloud Foundry Foundation.

Overall we have seen good uptake of both the certification and training products, but we expect the volume of usage to increase in the coming year. Over 12,000 students took the course on edX, showing broad interest from the wider technology community that we hope will lead to new engineers joining the Cloud Foundry community over time. Both the Certification Exam and e-learning Cloud Foundry for Developers course have had over 400 registrations respectively, and the rate of consumption increased towards the end of 2017. Nine unique training organizations have licensed the Cloud Foundry for Developers courseware, primarily for instructor-led (as opposed to e-learning) use, and we expect instructor-led versions of the course to be run more often in early to mid-2018.

In addition to the new training products, we ran our standard three one-day courses at Summit Silicon Valley, as we will again in Boston in April 2018. We are also looking for opportunities to broaden our Summit training offerings with more community-provided offerings.

KEY LESSONS FROM 2017

- The Cloud Foundry Application Runtime and BOSH platforms are seeing an increase in usage, not just in number of deployments or end user organizations. The more interesting growth is in the scale of adoption within many of the large enterprises that are using Cloud Foundry. This scale continues to grow at a rapid pace, and the projects must always keep in mind the need to balance new features / enhancements with the demands of these large scale users for performance and manageability.
- In late 2017, the Foundation added a community manager to the team to help expand on several of our key initiatives, including the Ambassador program, global Meetup support, ongoing content production, technical community health and integration of the Cloud Foundry technical community with several strategically-related open source communities.
- Innovation is alive and well in the Cloud Foundry technical community. This is clearly visible through the projects added to the Foundation's incubation process, our Summit Hackathons and by observing the larger Cloud Foundry community's efforts in open source projects. The Foundation staff must help the community harness as much of this innovation as possible, driving good ideas into the core project where appropriate.

- Certification and Training programs appear critical as an easy on-ramp mechanism for those joining the Cloud Foundry community from outside. However, in the area of instructor-led training, the ramp-up to get training partners to run fully subscribed instructor-led courses is more challenging than we initially expected.

AREAS FOR IMPROVEMENT IN 2018

- The Cloud Foundry technical community needs to increase its proactive engagement with other strategically relevant open source projects. While we saw significant improvement in this area over the course of 2017, our collective efforts in this area will lead to more opportunities for end users to get value out of the software being produced throughout the open source ecosystem.
- The Foundation team's community management efforts in late 2016 and early 2017 were limited due to the lack of clear responsibility for supporting community growth. Too much focus was put on core project committer diversification, to the detriment of other areas of potential opportunity for community growth. In late 2017, we welcomed a community manager to the team to help tackle these opportunities head on.
- We will increase our investment supporting both the uptake of the certification exam and the instructor-led training. A small number of certification exams will be offered free to each member of the Foundation in early 2018, in hopes of seeding the market with certified developers such that the rate of adoption will grow. We will also work closely with our training partners to help them generate demand and execute on instructor-led courses to build a higher volume of developers who have taken the course.
- We will continue to grow our learning opportunities at Summit events in 2018, with the addition of hands-on labs at Boston Summit, where Cloud Foundry users can experiment with new and novel technology, and continued use of the Hackathon format to engage with our more senior developers.
- In 2018, the Foundation will begin tracking committer diversity in order to draw a baseline and work to further diversify its community.

MARKETING & COMMUNICATIONS

In 2017 the Foundation built up an arsenal of content to deliver our messaging and redesigned the website to improve user experience. Throughout 2017, the marketing team aligned strategically with the communications team to bolster relationships with press and analysts, and to cement the Foundation as a go-to resource in the industry. Additionally, the marketing team worked diligently to enhance and simplify member engagement by introducing the Member Dashboard, a portal for members to gain access to messaging, research reports, marketing plans, Foundation documents, and content to use across their own marketing channels. By the end of 2017, the marketing team collectively built a trove of content, media coverage and a digital presence developed to drive strategy in 2018 and beyond.

GLOBAL CLOUD FOUNDRY EVENTS

With the support of our members, the Foundation executed two highly successful summits in Santa Clara and Basel, selling out registration and increasing attendance at both events from 2016. Notably, attendance at the European Summit increased by almost 25 percent year-over-year, and nearly doubled since 2015.

The Foundation will build upon this Summit strategy in 2018 with a new location for our North America Summit—this time bringing it to a new audience on the east coast in order to reach more enterprise users. The European Summit will return to Basel in October given its enormous success and highly lauded central location in 2017.

Cloud Foundry Days were not as plentiful in 2017 as they were in 2016. IBM led the charge with two Cloud Foundry Days in London and New York, while SAP Labs held a successful event in Bangalore. In 2018, it is our hope that members will continue to team up to hold these events in strategic regions and reach a wider audience worldwide.

INDUSTRY OPINION RESEARCH

Cloud Foundry continued to track our quickly-evolving industry, alongside hot topics and competitive landscape, through a regular cadence of two Global Perception Studies (GPS). This research provided high quality data on platform and emerging technologies and trends to guide Cloud Foundry marketing strategy and brand identity. Using the data from this research, Cloud Foundry continues to successfully navigate the rapidly changing cloud space—tracking where things are, where things are going, and what Cloud Foundry needs to do to maintain relevance for users today and tomorrow. GPS results were also consistently leveraged in conversations with analysts and journalists to add data points to the industry conversation around platform,

containers and serverless, as well as the industry's trajectory. The Foundation published four reports in 2017 based on quantitative and qualitative research provided by ClearPath, including What Developers Really Want, the 2017 Container Report, the first annual Application Runtime User Survey and the Cloud Journey report.

TRADE ANALYST RELATIONS

In 2017, Cloud Foundry Foundation broadened its outreach program to educate more analysts and research firms, conducting more than 100 analyst briefings across North America, Europe and Asia. Briefings were conducted throughout the year with analysts from 451 Research, Aberdeen, Applied Decision Research, ARCSight Partners, Bloor Research, CloudDon, CloudPulse Strategies, Constellation Research, Crisp Research, Current Analysis, Forrester, Freeform Dynamics, Gartner, GlobalData, Global Market Insights, IDC, Janakiram and Associates, MarkoInsights, MWD Advisors, Ovum, PAC, Parks Associates, Quocirca, RedMonk, Wikibon and others. Cloud Foundry was mentioned in more than 230 analyst reports or blogs in 2017.

There were successful invitation-only analyst events held at both Cloud Foundry Summit North America (Silicon Valley) and Cloud Foundry Summit Europe (Basel). At the analyst event in Santa Clara, fifteen analysts attended from nine firms including Constellation Research, CloudPulse Strategies, Forrester, Gartner, IDC, MarkoInsights, RedMonk, Pacific Crest Securities and Wikibon.

The customer panel at Cloud Foundry Summit Silicon Valley included representatives from Comcast, Home Depot, Humana, Mitsubishi Electric Europe and Royal Bank of Canada.

In Basel, seven analysts attended the analyst event from seven firms including 451 Research, Bloor Research, Crisp Research, Freeform Dynamics, GlobalData, IDC and PAC. The customer panel at Cloud Foundry Summit Basel included representatives from Allianz, AllState, Bosch, Delaware Consulting, Garmin International, KONE and Swiss Re.

DIGITAL

The Foundation built three core digital assets to fuel end user adoption and community participation: the website, re-architected and redesigned to focus on content aimed at the technical community; The Foundry, an online directory to serve as the gateway for the Cloud Foundry ecosystem; and the member dashboard, a single source for Foundation assets and access to the shared marketing program (see below).

We developed and executed on a digital marketing strategy to increase traffic to public-facing assets. This effort gave us an impressive 34 percent YOY growth in average pageviews/month, 121 percent growth in email database, and 23,569 new leads.

The Foundation developed a shared marketing program to raise the profile of Cloud Foundry through collective member participation. It took two forms. First, the member dashboard included ways to promote Cloud Foundry to gain access to additional member benefits—for example, multiple mentions of Cloud Foundry in a member company’s email newsletter to gain a banner ad in the Cloud Foundry email newsletter. Second, members could participate in a joint marketing pilot program alongside the Foundation and other members at a lower cost than if a company were to do it alone. For example, the IDG pilot included whitepapers from the Foundation, Pivotal, and Stark & Wayne, and resulted in 255 CIO leads and thousands of impressions across IDG’s network.

SOCIAL MEDIA GROWTH

Cloud Foundry garnered nearly 85,000 followers on Twitter alone in 2017, up almost 8,000 since the previous year. Social channels produced more than 77M impressions all together, driving a huge amount of engagement and visibility among influencers.

PRESS COVERAGE 2017

Cloud Foundry Foundation issued or an executive was quoted in 33 press releases. In addition, the Foundation communications team and its member organizations pitched a wide range of news items throughout the year. This activity led to 1,609 media mentions of “Cloud Foundry” in global coverage in 2017. News article mentions leaped by nearly 70 percent over 950 mentions in 2016, led by accelerating adoption of Cloud Foundry by end users. Another improvement in PR for 2017 was the 50 percent increase in mentions of “Cloud Foundry Foundation” in news articles, a jump from 224 in 2016 to 338 in 2017, with average monthly mentions increasing over time.

We began working with a European PR agency to increase press coverage on the European continent and increase visibility in anticipation of our Basel Summit. Abby Kearns met with multiple journalists and analysts during her visit to London in January, which resulted in coverage in ComputerWeekly, Silicon and ComputerWorld. In April, Abby met with Bertrand Garé, editor of L’Informaticien. This resulted in articles in both magazines, and a page interview in the May

edition of Programmez, a magazine for developers. Media coverage in Europe has increased with this additional focus on the market.

COVERAGE HIGHLIGHTS ARE BELOW

- CIO.de: **Zeit ist Geld: mit Cloud Foundry schneller zur App** (12/27)
- Computer Business Review: **Whole cloud market revenues to almost double by 2021** (12/7)
- eWeek: **Pivotal Expands Cloud Foundry and Container Services** (12/6)
- Cloud Computing News: **Facebook looks to wind power for Nebraska data centre** (11/16)
- LeMagIT: **La fondation OpenStack prône l'intégration par la collaboration entre communautés** (11/7)
- Golem: **Hybride Cloud-Plattform setzt auf Open Source** (11/2)
- Forbes: **Inside IBM's \$7-Billion Cloud-Solutions Business: 4 Great Digital-Transformation Stories** (10/25)
- Enterprise Times: **Cloud Foundry continues to grow** (10/13)
- LeMondelInformatique: **Cloud Foundry fait feu de tout bois pour son 1er sommet** (10/13)
- TechCrunch: **New Cloud Foundry project helps its developers run their cloud apps on their laptops** (10/12)
- TechCrunch: **Cloud Foundry adds native Kubernetes support for running containers** (10/11)
- The Register: **Container adoption still low barks Cloud Foundation** (9/11)
- Computer Business Review: **Rackspace to offer managed Pivotal Cloud Foundry** (7/18)
- The Register: **Cloud Foundry had a privilege escalation bug** (7/11)
- Heise: **Pivotal Cloud Foundry 1.11 führt rotierende Passwörter ein** (6/28)
- The New Stack: **Cloud Foundry's Abby Kearns Talks Inclusion, Interfaces** (6/27)
- Fortune: **How Insurance Giant Allstate Is Using Cloud Tech to Build New Businesses** (6/19)
- SDxCentral: **Bosh or Kubo? Tools for Deploying Containers Are Proliferating** (6/19)
- TechCrunch: **Cloud Foundry makes its mark on the enterprise** (6/18)
- ZDNet: **Cloud Foundry certification launches** (6/15)
- GeekWire: **Microsoft's open-source redemption tour continues, joins Cloud Foundry Foundation** (6/13)

- LeMondelInformatique: **Kubo arrive dans la Cloud Foundry Foundation pour assurer son essor** (6/13)
- VentureBeat: **Microsoft continues open source lovefest with new Cloud Foundry features** (6/13)
- VentureBeat: **Cloud Foundry Foundation eases Kubernetes management with Kubo** (6/12)
- InfoQ: **Cloud Foundry Foundation Launch Cloud Native Developer Certification and Training Program** (4/25)
- Enterprise Times: **Abby Kearns Talks About Cloud Foundry** (4/11)
- L'Informaticien: **La fondation Cloud Foundry veut seduire les developpeurs** (4/7)
- Heise: **Cloud Foundry Foundation startet Online-Kurs für Entwickler** (3/29)
- Light Reading: **Cloud Foundry Foundation Looks to Fill Enterprise Skills Gap** (3/29)
- Network World: **Cloud Foundry Foundation launches developer certification** (3/29)
- TechCrunch: **Cloud Foundry launches its developer certification program** (3/29)
- VMBlog: Q&A: **Cloud Foundry Foundation Unveils Impressive Cloud-native Developer Training and Certification Initiative** (3/29)
- Cloudcomputing-Insider: **IoT, Big Data und Machine Learning im Aufwind** (3/22)
- The New Stack: **PaaS vs CaaS: What it Actually Means for Application Developers** (2/20)
- Computerworld: **Cloud Foundry targets developers to spur enterprise adoption** (2/14)
- Datamation: **Cloud Foundry, PaaS, and the Future of Cloud** (1/18)

CLOUD FOUNDRY SUMMIT

Cloud Foundry garnered 292 global mentions the week of Silicon Valley Summit in June 2017, including more than 38 feature pieces of media coverage, led by the news of Microsoft joining the Foundation, spanning millions of unique readers.

Abby Kearns and Chip Childers hosted a dinner attended by more than a dozen reporters including TechCrunch, Reuters and ZDNet. Combined they met with two dozen reporters and eighteen analysts.



Coverage highlights are below:

- ArchiTECHt: **ARCHITECHT Daily: Microsoft joins Cloud Foundry, and Cloud Foundry embraces Kubernetes** (6/12)
- CBR: **Microsoft dives deeper into open source by joining Cloud Foundry** (6/14)
- Cloud Tech News: **Microsoft joins Cloud Foundry Foundation as gold member, strengthens open source push** (6/15)
- Datacenter Knowledge: **Microsoft Joins Hot Open Source PaaS Project Cloud Foundry** (6/13)
- eWeek: **Microsoft Joins Cloud Foundry Foundation as Gold Member** (6/16)
- GeekWire: **Microsoft's open-source redemption tour continues, joins Cloud Foundry Foundation** (6/13)
- ITPro: **Cloud Foundry Announces 'Certified Developer' Program** (6/13)
- Open Source Insider: **Microsoft joins Cloud Foundry Foundation** (6/14)
- Redmond Channel Partner: **Microsoft Throws Its Weight Behind Cloud Foundry** (6/15)
- Redmond Magazine: **Microsoft Joins Cloud Foundry Foundation and Pledges Extended Azure Integration** (6/14)
- SDX Central: **Microsoft Joins Cloud Foundry Foundation** (6/13)
- SiliconAngle: **Balancing developers and executives in a multi-cloud world** (6/20)
- SiliconAngle: **Cultivating a differentiated, open-source ecosystem for cloud** (6/14)
- SiliconAngle: **Is a cloud-native crash course the smarter, cheaper answer to developer shortage?** (6/16)
- SiliconAngle: **New tools redefine cloud-native, from applications to data** (6/15)

- SiliconAngle: **Startups snub Cloud Foundry, but legacy money talks, say analysts** (6/16)
- TechCrunch: **Cloud Foundry makes its mark on the enterprise** (6/18)
- TechCrunch: **Microsoft joins the open source Cloud Foundry Foundation** (6/13)
- The New Stack: **Cloud Foundry Summit Silicon Valley 2017: Microsoft Joins the Party** (6/14)
- ZDNet: **Cloud Foundry certification launches** (6/15)
- ZDNet: **Microsoft joins Java-oriented Cloud Foundry** (6/14)

Fifteen EMEA-based journalists attended Basel Summit: four from Germany, three from France, seven from the UK and one from Ireland. More than 76 unique pieces of coverage published in publications including ComputerWeekly, The New Stack, ComputerworldUK, Enterprise Times, L'Informaticien, Cloud Computing Insider, LeMagIT, Programmez, Com Professional and others. We held a press conference with Abby Kearns detailing the main announcements before opening up to questions. More than fifteen interviews were organized between journalists and end users, partners and Cloud Foundry members.



Coverage highlights are below:

- Businesscloud: **Cloud Foundry mit Markteinführung von "Container Runtime", dem standardmäßigen Container-Bereitstellungsverfahren für Cloud Foundry, das Kubernetes und BOSH nutzt** (10/11)
- CIO-Online: **Transformation digitale rime avec Open-Source chez Volkswagen** (10/19)
- Computer Weekly: **Why agile teams prefer to bring their own development tools to projects** (10/13)
- ComputerWorld UK: **Cloud Foundry reveals growth and global scale in first user survey** (10/11)
- ComputerWorld UK: **Volkswagen undergoes culture shift to match its new open source approach** (10/13)
- Cloud Magazine: **Cloud Foundry lance "Container Runtime"** (10/11)

- Cloud Magazine: **Cloud Foundry met à disposition the Foundry** (10/11)
- Cloud Magazine: **Ouverture du European Cloud Foundry Summit 2017** (10/12)
- Cloud Pro: **Cloud Foundry unveils Cloud Foundry Container Runtime** (10/12)
- DatacenterDynamics: **Cloud Foundry launches single marketplace for the entire ecosystem** (10/11)
- Datacenter Dynamics: **Cloud Foundry simplifies app container deployment** (10/12)
- Datacenter Insider: **Cloud Foundry-Studie zum Einsatz von Containern** (9/14)
- Datacenter Insider: **Ein Cloud-Ausfall ist jederzeit möglich** (9/28)
- Datacenter Insider: **Neue Container Runtime und neuer Online-Marktplatz für Cloud Foundry** (10/13)
- Datacenter Insider: **Cloud Foundry wird erwachsen** (10/19)
- Data Economy: **#CFSummit 2017: Cloud Foundry Makes Strongest Bid For Cloud Containers In Its History** (10/11)
- DevOps Online: **Cloud Foundry Study Confirms Accelerated App Development** (10/11)
- Enterprise CIO: **Cloud Foundry launches Container Runtime** (10/13)
- Enterprise Times: **Cloud Foundry launches The Foundry marketplace** (10/12)
- Enterprise Times: **Cloud Foundry continues to grow** (10/13)
- Heise: **Cloud Foundry Summit: 600 Tools und Tipps für Entwickler** (10/11)
- Heise: **Cloud Foundry Summit: Container-Nutzung weiterhin schleppend** (10/11)
- IAVC World: **Cloud Foundry startet Online-Marktplatz** (10/11)
- Informatique News: **Quelles tendances dans le monde des conteneurs?** (10/18)
- IT Pro: **Cloud Foundry unveils Cloud Foundry Container Runtime** (10/12)
- IT-Reseller: **Cloud Foundry startet Online-Marktplatz** (10/11)
- ICTK: **Swisscom verstärkt Engagement für Cloud Foundry** (10/11)
- Inside-IT: **Cloud Foundry lanciert einen Online-Marktplatz** (10/11)
- JAXenter: **Women in Tech: Vielfalt sichert Innovation** (10/11)
- LeMagIT: **Cloud Foundry Summit : BOSH devient aussi un standard pour déployer Kubernetes** (10/11)

- LeMagIT: **Comment Swisscom a doté son Paas d'une infrastructure multi-laas** (10/16)
- LeMondelInformatique: **Cloud Foundry fait feu de tout bois pour son 1er sommet** (10/13)
- LeMondelInformatique: **Volkswagen mise sur l'open source et le DevOps** (10/17)
- L'Informaticien: **Cloud Foundry tient sa conférence européenne** (10/11)
- Linux Magazin: **Cloud Foundry: Nutzer sind Entwickler großer Firmen** (10/11)
- Linux Magazin: **Erfolgreicher Cloud Foundry Summit** (10/12)
- Linux Magazin: **Cloud Foundry kündigt Online-Marktplatz an** (10/12)
- Netzwoche: **Swisscom verstärkt Engagement für Cloud Foundry** (10/12)
- Programmez: **Cloud Foundry lance "Container Runtime"** (10/11)
- Programmez: **Cloud Foundry met à disposition the Foundry** (10/11)
- Programmez: **Ouverture du European Cloud Foundry Summit 2017** (10/12)
- Programmez: **Cloud Foundry s'étend au local** (10/12)
- Pro-Linux: **Cloud Foundry erhält neue Container-Laufzeitumgebung** (10/12)
- SDXcentral: **Cloud Foundry Morphs Kubo into Container Runtime** (10/11)
- SiliconANGLE: **Cloud Foundry gets new software container toolkit codeveloped by Google** (10/11)
- Silicon.fr: PaaS: **Cloud Foundry accueille les conteneurs avec Container Runtime** (10/16)
- TheStack.com: **Cloud Foundry announces online marketplace for expanding ecosystem** (10/12)
- TechCrunch: **Cloud Foundry adds native Kubernetes support for running containers** (10/11)
- TechCrunch: **New Cloud Foundry project helps its developers run their cloud apps on their laptops** (10/12)
- VMBlog: **Cloud Foundry Launches "Container Runtime" as Default Container Deployment Method for Cloud Foundry Using Kubernetes and BOSH** (10/11)

KEY LESSONS FROM 2017

- Member Engagement: Member marketing of Cloud Foundry is essential to the success of Cloud Foundry. In 2017, the Foundation built a members-only marketing dashboard to house real-time Foundation data and collateral, including details on the shared marketing program

to incentivize members to gain additional benefits from the Foundation by helping to promote Cloud Foundry.

- **Cloud Foundry Summits:** We need increased member support and sponsorships earlier in the process. Member marketing and promotion is essential for success—This cannot be overstated.
- **Analysts:** In 2017, the Foundation focused analyst briefings on Cloud Foundry, community, containers, and their relationship to each other. In 2018, we will deliver clear, concise messaging around the interoperability story, and further clarify use cases for Application Runtime and Container Runtime and other inflection points with Kubernetes.
- **End Users:** They are critical to our success. In 2017, we built on our user stories program to provide a steady stream of use cases, showcasing both technical and business level results. We remain heavily reliant on our distributions providing access to users, which must continue in 2018.
- **Developers:** In 2017, we built our messaging to reach the developer community. Our developer-centric content ran the gamut from keynotes to open letters to marketing campaigns targeting developers for certification. While this audience remains crucial to Cloud Foundry, in 2018, we will extend our reach to operators and CIOs. The interoperability story will also clarify our relationship with Kubernetes and other technologies.
- **Awareness:** The inclusion of the “Cloud Foundry” name by several of the Certified distributions will continue to elevate the awareness of Cloud Foundry.

AREAS FOR IMPROVEMENT IN 2018

- **Member Engagement:** The Member Dashboard is a central hub for members to find content, earn rewards in the Shared Marketing Program and find talking points for Marketing Work Group calls. More participation is needed! We need member commitment to marketing efforts via time and resources.
- **Certification Marketing:** Developer Certification and Training is key to unifying the worldwide developer community for Cloud Foundry. The growth of Cloud Foundry awareness at the enterprise developer level will increase economic value to the entire ecosystem. We need continued marketing commitments from licensees to perform the series of requirements tied to this certification.
- **Cloud Foundry Days:** In 2016, members hosted five Cloud Foundry Days in the Asia-Pacific region. In 2017, there were three Cloud Foundry Days in New York, London and Bangalore.

In 2018, it is our hope that members will rise up to hold these events in strategic regions and reach a wider audience worldwide.

- Digital Marketing: In 2018 we will focus on ecosystem and community growth, including:
- Growing The Foundry directory and engagement;
- Improving the “first 30 days” experience for new users;
- Expanding the shared marketing pilot to encompass additional member benefits;
- Expand content and engagement to APAC, including social media (i.e. WeChat and YouKu), and localized websites.

Foundation Operations

In 2017, we streamlined operational initiatives and worked diligently to ramp up membership management, spearheaded by Michelle McManus.

Member satisfaction was a key focus for the Foundation with initiatives such as an Annual Member Survey, Quarterly Member Meetups, New Member on-boarding, and monthly From the Desk of the Executive Director emails. We continue to look for opportunities to increase engagement with our members and the community at large.

As a Foundation, we added two employees, and promoted three. See below for a detailed outline of our internal changes:

Foundation New Hires and Promotions

- Devin Davis to *Vice President of Marketing*
- Michelle McManus to *Manager, Member Relations*
- Caitlyn O'Connell to *Marketing Communications Manager*
- Paige O'Connor: *Group Administrator*
- Swarna Podila: *Senior Director, Community*

KEY LESSONS FROM 2017

- The focus on member engagement and satisfaction drove positive results. Feedback from our members, via surveys, offered tremendous insights into what members value, and influenced our communication and engagement with members, as well as updates to our member benefits. This will continue to be a focus area in 2018.
- Remaining agile as an organization allows us to grow and evolve alongside our members.

AREAS FOR IMPROVEMENT IN 2018:

- Continued focus on member satisfaction, and deepened engagement with all of the members. We will continue to send out member surveys and use those to guide continuous improvements to member engagement and member benefits.
- Increase membership across Platinum, Gold and Silver tiers with an added focus on the Asia Pacific region.
- Continued cross-collaboration between other technologies and projects.

*We are still closing the books on 2017. We will resend with completed 2017 financials in February 2018.

Conclusion

As a Foundation, we've learned a lot from our extended community—developers, end users, committers and technologists working on other open source projects—in the last year. This learning was directly funneled into our efforts throughout 2017 and will lay the groundwork for our focus areas in 2018. Our key focus areas in 2018 will be:

- Member and Community Growth: Continue to grow our membership base while deepening our engagement with the Cloud Foundry and other open source communities;
- Ecosystem: Broaden the ecosystem of services and capabilities around Cloud Foundry;
- Interoperability: Continue to build bridges to other technologies surrounding Cloud Foundry.

Our vision is to ensure all our members and users are able to rely on Cloud Foundry for the long term. Cloud Foundry is already in use by the majority of the Fortune 500—going forward, we want to be the shared R&D for the Global 2000 and beyond.

We look forward to partnering with you—our community—to ensure this future.

