

REPORT REPRINT

Pivotal and the cloud-native enterprise

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If you are one of the growing number of enterprises that are committed to a cloud-first strategy, the next clarion call will be to go cloud native. In that case, Pivotal should be on your list of vendors.

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Pivotal recently held its annual SpringOne Platform conference in Washington DC, where the company laid out its thoughts on creating ‘the weekly enterprise’ – one that can release new code securely on a weekly basis. It also posed the question, ‘Kubernetes, what is it good for?’

THE 451 TAKE

Pivotal continues to grow the ranks of its Pivotal Cloud Foundry (PCF) customer base among large enterprises while its Pivotal Container Services (PKS, with a ‘K’ to denote Kubernetes) offering is powering penetration of the midmarket, which had previously not been a focus for the company. To fulfill its expectations for the next phase of business development following its IPO, its relationships with members of the systems integrator community are highly important. Work on partnership alliances is ongoing, as Pivotal seeks to become a more mainstream open source software choice.

CONTEXT

Cloud Foundry is an open source PaaS system that allows users to create and manage applications without any need to access underlying hardware, mostly via containers. Pivotal is the commercial standard-bearer of Cloud Foundry, and its version of the software, PCF, is by far the most widely used. Like other open source software firms, Pivotal makes money offering premium support and services to users and it targets the largest organizations. Spun off of VMware, Pivotal has a rich ecosystem to tap into, and it has done so effectively, culminating in the April IPO this year, which effectively capitalized the company to the tune of \$555m.

KUBERNETES

Cloud Foundry and Pivotal take an application-centric approach to software development, while Kubernetes takes a more container-centric approach. In 2017, Pivotal, VMware and Google teamed to provide PKS. This is a commercial offering of Kubo, now known as Cloud Foundry Container Runtime, Pivotal’s integration of Kubernetes container management and orchestration with the more established Cloud Foundry BOSH automation software. Meanwhile, Diego is now a component of ‘Application Runtime,’ which takes a more PaaS-like approach. Both runtimes actually run containers, but they bring different development perspectives to the app dev party. The idea is that developers use the right tool for the right job.

There is a real buzz around Kubernetes at the moment, with 451 Research finding that of enterprises using containers, 71% of respondents were using Kubernetes.

That excitement is justified, according to Pivotal’s SVP of strategy James Watters. Kubernetes is an interesting technology in that it’s proven with customers in production that you can not only use it to build new, cloud-native microservice applications, but people have also been able to migrate existing applications into containers and run them in Kubernetes. In addition, it supports cutting-edge application development technology, like serverless architecture.

However, Watters thinks that enterprise adoption of Kubernetes may be misplaced in that the technology is not a VM replacement and yet some CIOs are running on bare metal to avoid VMware licenses. Nor is it self-updating with an inclusive operating system and so with its four times a year release pace, CIOs will struggle to keep up as release support stops every nine months.

While Pivotal believes that Kubernetes is a killer use case for Cloud Foundry BOSH, it sees the containers market momentum as a retrograde step in that the developer benefits of PaaS, such as lower development complexity and higher operational efficiency, are not as sophisticated in the container environment. Nevertheless, Pivotal expects developers to consume the different services available from Pivotal Services Marketplace as they need them. And, of course, Pivotal has opened up the ability for ISVs to now run their marketplace services on Kubernetes as well.

Given the level of interest in Kubernetes, Pivotal is working with system integration partners wanting to take advantage of PKS for clients. Pivotal has already extended PKS to support AWS and support for Azure is on the way, so that it is possible for partners to provide something that feels like a managed Kubernetes environment.

PARTNERING STRATEGY

The modernization path for pre-digital companies to move to a cloud environment and change business development is hard enough. It becomes more difficult when an environment is updated four or five times a year, and yet cloud migration is necessary to get to the monthly production cycles many pre-digital companies covet. Pivotal is teaching systems integrators how to do this via training programs at its Platform Acceleration Lab in Colorado, where it offers a playbook and relevant certification exams. Although many customers for PCF begin by working with Pivotal, the company deliberately keeps its professional services priced at a premium because becoming a global systems integrator is not what it wants to do. And yet, of course, customers do need to work with systems integrators to deploy at scale, because agile development at scale is hard.

Pivotal itself is at an interesting juncture following its IPO – it currently has 360 subscribing customers, but to grow to 10,000 customers requires a different attitude to the market. Whereas Pivotal used to be quite dismissive of outsourcing, it is softening that stance. It recognizes that it is possible for enterprises to outsource the entire DevOps piece, albeit to small agile landing pods from IT service providers rather than the large teams that used to get involved in the pre-digital outsource contract. The use of Pivotal software enables global systems integrators to continue to manage IT estates for clients but also enables them to more easily bring in innovation.

Whereas other digital native software vendors get proactively involved in working with customers to help them select IT service partners, this is not currently the way Pivotal operates. It typically takes the view that one or more incumbent systems integration providers within an enterprise account will have Pivotal skills and so steers the customer conversation toward those incumbents. One change it is making to its partnering strategy is to formalize the presentation of business outcome-based successes that systems integrator partners have achieved. In this way it plans to create more go-to-market motions around these business results, rather than building partnering webpages around logos.

Beyond the technology sector itself, Pivotal is seeing continued momentum in the financial services, federal & government, retail and telco sectors, where it aspires to infuse the larger application development service lines of up to 50,000 developers within large enterprises with agile techniques and DevOps skills. At present it recognizes that its entry into these large enterprises is often not mainstream because it works with a small team of five or so in-house programmers via its pair programming technique. To become a scale open source software provider, Pivotal needs help from the global systems integrator community. And conversely, the systems integrator community is realizing the benefits of open source software in pivoting to new digital revenue streams. Indeed, Pivotal has found over the past year that more systems integrators are reaching out to it to partner, and that when they partner they are more serious about their commitment to training consultants than they used to be.

Pivotal is also winning more midmarket customers than it used to, in large part because of its embracing of Kubernetes, since PKS lowers the entry point as a way to get started with Pivotal software. In particular, partner and erstwhile parent VMware is selling a lot of PKS to the midmarket.

CUSTOMERS

Thomas Fredell, chief product officer of Merrill Datasite, was one of the Pivotal customers 451 Research spoke with at the SpringOne event. Merrill Datasite's core offerings specialize in due diligence for mergers, acquisitions, S-1 filings and other capital transactions. Four years ago, the company decided to transition to a digital SaaS-based offering, called Merrill DatasiteOne. Fredell was brought in to lead the change, heading up UX, product management, engineering, DevOps and operation of the environment.

The organizational vision was to operate as a startup, but with 3,000 employees and \$800m revenue from the start. Merrill's board agreed to the necessary investment in technology and people, and Fredell began by carving off parts of the IT team that had been focused on product, taking over 60 staff in the US and India for the project.

The team began by building the infrastructure for the next-generation product because it did not want the user interface to be hard-wired to any specific business-line requirements. REST APIs were selected over SOAP, because while the latter were considered robust and rigorous, they were felt to be too heavyweight. The API layer connected to a monolithic Oracle back end, and the decision was made to go for a micro-services architecture.

The team selected Microsoft Azure as its IaaS because at the time, it had the best compliance and security components needed to satisfy the financial institutions that are Merrill's clients. Three years ago, Fredell opted to work with Pivotal for application development environment. Merrill began by bringing external application development resources to get started, and it took 18 months to get to a self-sustaining development position.

As a Pivotal customer, Fredell likes the maturity of PCF and Pivotal – both its philosophy and its way of working via pair programming and the Pivotal Dojo. Merrill DatasiteOne has now reached a daily deployment of underlying VMs for code release, but the progress has not been smooth sailing. Of those original 60 developers that began the project four years ago, very few remain part of the 150 people Fredell now manages. But, on the upside, over 90% of new Merrill products are on Pivotal, and top-line revenue has grown by 20%.

COMPETITION

Pivotal is not the only distribution of Cloud Foundry code available and competitors include Atos Cloud Foundry, Huawei FusionStorage, IBM Bluemix, SAP HANA Cloud Platform, Swisscom Application Cloud and Fujitsu K5. From a professional services point of view, Pivotal does not offer staff augmentation but rather focuses on improving team performance and its key SI partners include Accenture, Capgemini and Cognizant.

Pivotal partners with the major IaaS providers – AWS, Google and Microsoft – but with the convergence of IaaS and PaaS, these companies also represent competition for the company. Another competitor (especially for PKS) is Red Hat, which has been aggressively integrating and supporting Kubernetes with its OpenShift PaaS since 2015. As another top CaaS option for enterprises, the container services from Amazon and Microsoft Azure also represent PKS competition.

SWOT ANALYSIS

STRENGTHS

As the most visible commercial backer of the open source Cloud Foundry PaaS, Pivotal benefits from the vital community behind the software. Unlike many other companies with Cloud Foundry distributions, it is not distracted by other PaaS portfolio capabilities or practice rivalries.

WEAKNESSES

Pivotal's focus on primarily net-new, cloud-native applications has enabled the company to be at the forefront of dramatic changes in strategy and spending among large enterprise customers that are pursuing digital-transformation projects. However, despite the ability to replatform legacy applications, its strong association with the new poses some challenges in gaining greater penetration of enterprise accounts where legacy IT estates create resistance to change.

OPPORTUNITIES

Pivotal's greatest near-term opportunity probably lies with PKS as the fashion for containers continues to gather speed. And, as the company is already seeing, this offering is proving especially popular with the mid-market buyers that have so far been slow to adopt Pivotal software.

THREATS

In order to achieve its business development goals to become a much larger mainstream open source software provider, Pivotal has to work more closely with the global IT service providers, and the challenge here is that many of them have their own Cloud Foundry distributions, limiting the partnerships Pivotal can forge.