DATA SHEET

Pivotal CF

THE LEADING ENTERPRISE PAAS POWERED BY CLOUD FOUNDRY

AT-A-GLANCE

- Pivotal CF provides a turnkey PaaS experience for agile development teams to rapidly update and scale applications on a private cloud that can be instantly expanded and upgraded with no downtime.
- Pivotal CF is the first integrated platform encompassing the industry's leading big data framework, Apache Hadoop, and the leading open source PaaS, Cloud Foundry, to enable enterprise developers and cloud operators to build, manage and scale a new class of applications that leverage modern frameworks that instantly bind to massive data sets.
- Pivotal CF Elastic Runtime Service provides a complete, scalable runtime environment, extensible to most modern frameworks or languages running on Linux. Deployed applications enjoy built-in services, and can automatically bind to new data services through a service broker or to an existing user provided service.
- Pivotal One Services - available add-ons such as Pivotal HD, Pivotal RabbitMQ and MySQL Dev include automatic application binding and service provisioning.
- Pivotal CF Operations Manager is the world's first IaaS-integrated PaaS Operations Manager to support turnkey, fully automated deployment, canary-style updates and 1-click horizontal and vertical scaling on vSphere private clouds.

OVERVIEW

BECOMING A SOFTWARE DRIVEN ENTERPRISE

Software is eating the world — executives cite software as the top factor impacting their organizations. Companies effectively using software development to achieve competitive advantage are more profitable than their peers[1]. Organizations such as Square ($3.5B valuation, Financial Services), Uber ($3.5B valuation, Transportation), Netflix ($19B valuation, Media and Entertainment), Airbnb ($3.5B valuation, Hospitality), the Climate Corporation ($1.1B acquisition, Agriculture) and Etsy ($600M valuation, Boutique Retail) are using software to change industries and disrupt business models.

Powering this trend is a new generation of developers driving a deep shift in platforms and processes. These developers work in agile teams and demand a platform that allows them to continuously deliver updates to and horizontally scale their applications with no downtime. They seek standardized ways to plug in leading data services and perform deep user analytics on top of massive datasets to drive rapid iteration based on customer needs.

An enterprise PaaS, powered by Cloud Foundry, is the key enabler for achieving the modern, software driven organization. Purpose built for continuous delivery and horizontal architectures, Cloud Foundry allows developers to focus on the application as the unit of deployment and scale, not infrastructure. It provides an abstraction layer that enables enterprises to make infrastructure choices based on price, performance, location and efficiency.

WHY PIVOTAL CF™?

Companies seeking to become a software-driven enterprise for greater agility are often impeded by the complexity of deploying, upgrading, operating and scaling a PaaS on their private cloud.

[1] The software edge: How effective software development and delivery drives competitive advantage, IBM Institute for Business Value, March 2013.

Pivotal CF is the leading enterprise PaaS, powered by Cloud Foundry. It delivers a turnkey experience for scaling and updating PaaS on the private cloud, with no downtime. Pivotal CF enables developers to provision and bind leading application and data services such as Hadoop on a unified platform. It empowers businesses to deliver applications and update them with new features at a velocity and scale previously only available to Internet giants, allowing enterprises to innovate with disruptive speed.

WHAT'S INSIDE

Pivotal CF includes

- **Pivotal CF Elastic Runtime Service –** Provides a complete, scalable runtime environment, extensible to most modern frameworks or languages running on Linux. Deployed applications enjoy built-in services, and can automatically bind to new data services through a service broker or to an existing user provided service.
- **Pivotal CF Operations Manager –** Industry's first turnkey enterprise PaaS management platform with IaaS integration
- **Pivotal One Services –** Available add-ons such as Pivotal HD, Pivotal RabbitMQ and MySQL include automatic application binding and service provisioning.

PIVOTAL CF ELASTIC RUNTIME SERVICE

SELF SERVICE PLATFORM FOR APPLICATION MANAGEMENT

Pivotal CF provides the ideal self-service platform for development teams of any size to start small and rapidly evolve new ideas into complex applications, increasing business agility. Developers upload their application source files using the CF CLI or via plugins for popular IDE and build tools like Eclipse, Maven, Gradle, Jenkins, Bamboo and more.

The simplified semantics of the CF CLI and REST API allow users to manage and scale applications, as well as create and bind zero-touch data services. Pivotal CF's role-based control and lifecycle staging isolation enable different teams to be responsible for early development, testing, staging and ultimately production. A web console allows developers and application owners to monitor, manage and administer users and services.

FLEXIBLE MULTI-LANGUAGE 'BUILDPACK' ARCHITECTURE

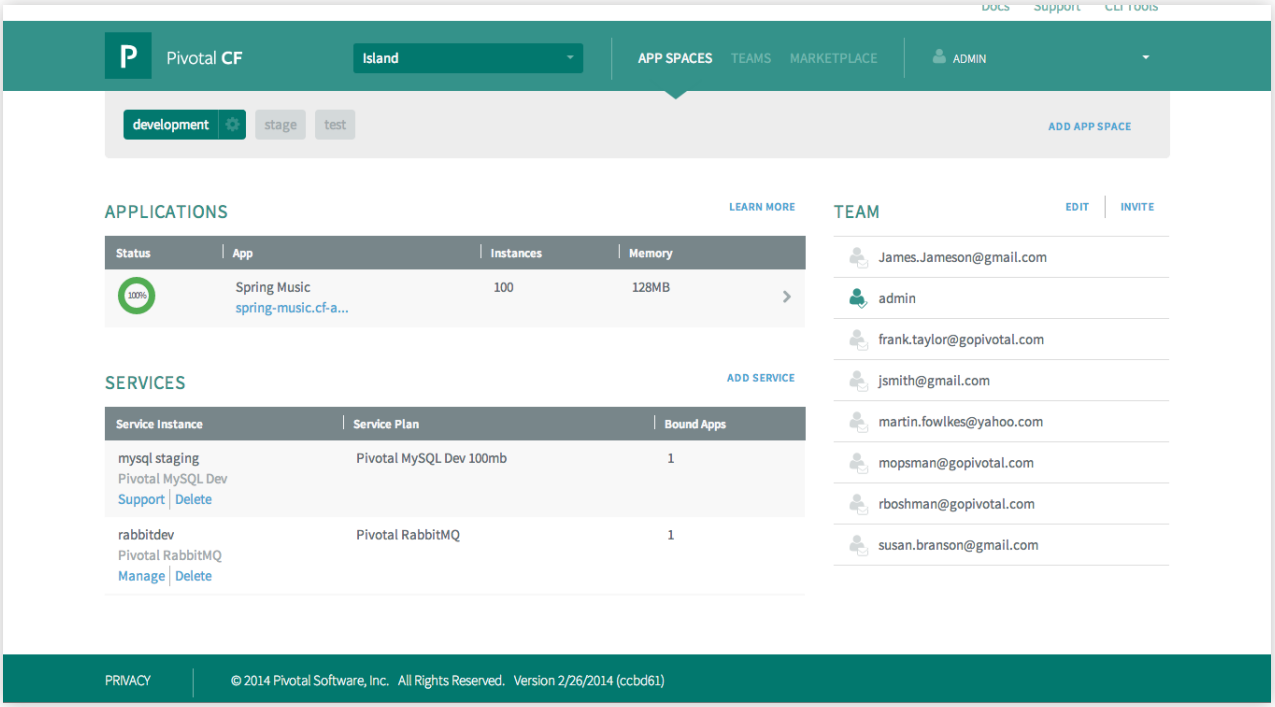
Developers simply push applications to Pivotal CF for an "it just works" experience. Pivotal CF uses a flexible approach called buildpacks to dynamically assemble and configure a complete runtime environment for executing a particular class of applications. Rather than specifying how to run applications, developers can rely on buildpacks to detect, download and configure the appropriate runtimes, containers, and libraries.

FEATURES

- Pivotal CF Elastic Runtime allows developers to deploy, scale and manage applications and bind services using simplified semantics and APIs, so they can focus on writing code, not configuring infrastructure or middleware.
- Buildpacks dynamically provide the appropriate runtime environment and Elastic Runtime automatically configures services so applications can be moved from development and test to staging and production environments with no changes. Operators can add new runtimes using buildpacks and control the order in which buildpacks are applied.
- Outstanding Java Spring support through the Pivotal provided Java buildpack. Spring applications require no changes to get started on Pivotal CF and enjoy zero-touch service integration.
- Deployed applications receive built-in services for horizontal scaling, load balancing, DNS, automated health management, and logging, resulting in a dramatic reduction in the number of vendors and integrations required for continuous software delivery.
- Web console allows developers and application owners to manage and administer users and services.
- Pivotal CF Loggregator delivers the ability to tail a unified log stream of application platform events and end user actions to clients and publish the log stream to a syslog drain for integration with log analytics tools.
- Pivotal HD service - enables cloud operators to build, manage, and scale Hadoop as a natively integrated Pivotal CF Service. Enterprises can go from zero to Hadoop in minutes using Pivotal CF's support for parallel deployment.
- Pivotal RabbitMQ Service – a message broker for applications running on Pivotal CF.
- Pivotal MySQL Dev – provides the ability to provision multi-tenant, single instance MySQL databases suitable for rapid development and testing.

Since buildpacks are extensible to most modern runtimes and frameworks running on Linux, enterprises can deploy apps written in nearly any language to Pivotal CF. Pivotal provided buildpacks for Java, Ruby and Node are part of a broad buildpack provider ecosystem that ensures constant updates and maintenance for virtually any language. Operators can add new runtimes using buildpacks and control the order in which buildpacks are applied.

PIVOTAL CF DEVELOPER CONSOLE



OUTSTANDING JAVA SPRING SUPPORT AND ZERO-TOUCH SERVICE INTEGRATION

Enterprises can expect outstanding Java Spring support through the Pivotal provided Java buildpack. Most Spring applications require no changes to get started on Pivotal CF and, once there, enjoy zero-touch integration with services such as MySQL and RabbitMQ. The Java buildpack automatically infers memory settings and configures the container for bound services so developers can focus on writing code, not configuring middleware.

DEPLOYED APPLICATIONS ENJOY BUILT IN SERVICES

Once deployed to Pivotal CF, applications enjoy built-in services for:

- Instant, horizontal application tier scaling
- Load balancing and DNS
- Automated health management
- Logging and auditing
- User and services management via a Developer Console

The built in features of the Elastic Runtime service allow enterprises to dramatically reduce the number of vendors and integrations required for continuous software delivery.

Pivotal CF supports horizontal scaling and rapid application deployment via updates to a shared routing tier for all applications in real-time. Tight coordination of dynamic routing and fast, dynamic container creation are at the heart of Pivotal CF's ability to instantly scale and update hundreds of instances. Pivotal CF empowers enterprises to support mobile and social applications and update them with new features at a velocity and scale previously only available to Internet giants.

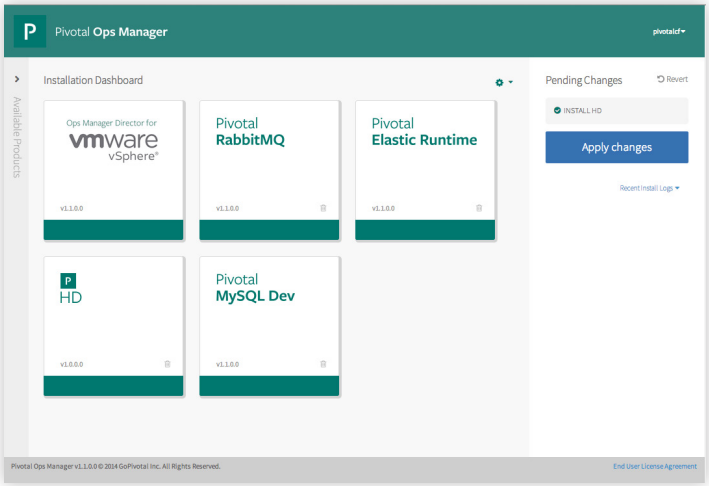
A truly scalable platform must maintain availability for all running applications with minimum operator intervention. Pivotal CF's 3rd generation application health manager continuously monitors all applications running on a Pivotal CF instance and intervenes to make the actual state match the intended state for single second app recovery.

The ability to deliver a unified log stream of application platform events with end user actions for root cause analysis and understanding end-to-end service delivery is key to unlocking the value of an organization's unstructured data. Pivotal CF Loggregator delivers the ability to tail a unified log stream of application platform events and end user actions to clients like the CF CLI, and publish the log stream to a syslog drain for integration with tools such as Splunk or logstash.

STANDARDIZED SERVICE CONFIGURATION AND EXTENSIBILITY

Enterprises are shifting towards consumable web services to simplify configuration and increase application extensibility and portability. Developers using Pivotal CF's standard service "binding" mechanism benefit from automatic provisioning,

configuration, management and storage of service connection information, credentials and dependencies. The application can now be moved from development and test to staging and production environments with no changes.



PIVOTAL CF OPERATIONS MANAGER

WORLD'S FIRST IAAS INTEGRATED PAAS OPERATION MANAGER

Pivotal CF is the only PaaS that supports direct IaaS API integration for turnkey deployment and full life-cycle management. Pivotal CF Operations Manager installs from a single virtual appliance (OVA). From there, Operations Manager fully automates the deployment of Pivotal CF, using IaaS APIs, onto a resource pool of Linux VMs with Linux containers.

RAPID, TURNKEY DEPLOYMENTS AND UPDATES OPTIMIZED FOR VSPHERE

Cloud operators can use a simple interface for rapid, turnkey deployment onto a vSphere environment running in their data centers. Operations Manager uses 'canary-style' deployments to perform live updates of a running Pivotal CF system. This allows a cloud operator, with a few clicks, to:

- Both vertically and horizontally scale the Elastic Runtime and Pivotal One services
- Provide continuous software updates and upgrades for Pivotal CF, including OS patches

without application downtime. Pivotal CF Operations Manager provides a general mechanism for turnkey deployment of large-scale distributed services, including one-click deployments of Pivotal CF Elastic Runtime, Pivotal HD and Pivotal RabbitMQ add-ons. Enterprises can go from zero to Hadoop in minutes using Pivotal CF's support for parallel deployment.

PIVOTAL ONE SERVICES

PIVOTAL HD SERVICE

The Pivotal HD service for Pivotal CF enables cloud operators to build, manage, and scale Hadoop as a natively integrated Pivotal CF Service. Via the Service Broker, apps can bind to this service automatically assigning capacity in HDFS, a database in HAWQ, and a resource queue in YARN. For application developers this reduces development cycle time by eliminating the typical complexities around deployment, security, networking, and resource management that are commonly associated with developing applications on Hadoop.

PIVOTAL RABBITMQ SERVICE

Pivotal RabbitMQ is a multi-protocol message broker for applications running on Pivotal CF and beyond. With Pivotal RabbitMQ, enterprises can provision a highly-available multi-node clustered message broker, supporting multi-tenant and multi-protocol use. By bringing asynchronous messaging to applications, Pivotal RabbitMQ increases their speed, scalability and reliability.

PIVOTAL MYSQL DEV SERVICE

Using the Pivotal MySQL Dev service, enterprises can provision multi-tenant, single instance MySQL databases suitable for rapid application development and testing.

LEARN MORE

To learn more about our products, services and solutions, visit us at **goPivotal.com.** To learn more about Pivotal CF visit docs.gopivotal.com/pivotalcf.

DOWNLOAD

Download Pivotal CF for evaluation at network.gopivotal.com.

Pivotal™

At Pivotal our mission is to enable customers to build a new class of applications, leveraging big and fast data, and do all of this with the power of cloud independence. Uniting selected technology, people and programs from EMC and VMware, the following products and services are now part of Pivotal: Greenplum, Cloud Foundry, Spring, GemFire and other products from the VMware vFabric Suite, Cetas and Pivotal Labs.

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