



WHITE PAPER

PCF: A CLOUD-NATIVE PLATFORM BUILT FOR SPEED

Pivotal Cloud Foundry (PCF) is a proven solution for companies seeking software-led digital transformation. It can continuously deliver any app to every major private and public cloud with a single platform. Most importantly, it can help you bring your digital applications to market faster.

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In 2017, our partner Pivotal **commissioned Forrester Consulting** to conduct an economic study to examine the return of investment of PCF. Forrester reported the following benefits among users:

- **Operational Efficiency.** Due to reductions in resources for operations.
- **Increased Productivity.** Resulting from the self-service nature of PCF.
- **Decreased Downtime.** Because of higher quality, secure software.
- **Better Ability To Support Business Growth.** Thanks to shortened releases cycles and faster market responses.

Solutions For Any Scenario

PCF offers great flexibility at the migration stage. It doesn't have to be a complete overhaul of your technology (although it can be). Magenic works with Pivotal to provide assessments to determine cloud-readiness. Your organization might fall anywhere on a scale from cloud ready, to cloud friendly, to cloud resilient, to cloud native, with solutions in place for each.

You might find that replatforming, a migration from legacy client-server infrastructure to PCF, is right for your organization. This is a good option when your technology is simple (such as a form-based app) and can be deprecated in a reasonable time frame. Or you might find that technology modernization, redesigning and reworking an application, is the better move for you. This could be a preferred option when your technology has a high level of complexity.

Here's a business scenario: you have heavily invested in a portfolio of legacy applications that are working just fine. Should you just walk away from those investments? Well, yes and no. In the long run, modernizing your software and embracing PCF will save you lots of money. But you also don't have to move outside your short-term comfort level. You can transition gradually if you'd like.

That leads us to microservices. Microservices is an architectural style that structures an application as a collection of services that are highly maintainable and testable, loosely coupled, independently deployable, and organized around business capabilities. It enables the continuous delivery of large, complex applications. It also enables your organization to evolve your technology stack. You can even run microservices on top of PCF. There is limitless potential for customized solutions.



Be Part Of The .NET Renaissance

If your organization relies on .NET applications, think of PCF as your opportunity to be part of a larger movement: the .NET Renaissance. PCF supports .NET Core (on Linux and Windows), as well as the .NET Framework. Modernized applications can continue to leverage existing frameworks and code bases in the .NET Framework. Otherwise, they can move to Microsoft's next generation framework, .NET Core.

There are tradeoffs for using either framework. With .NET Core, you save on OS licensing. Conversely if .NET Core lacks a supporting library you may need, while the .NET Framework has it, stay with the .NET Framework.

When using PCF, the go-to choice for .NET Core and the .NET Framework is the open source Steeltoe framework. Steeltoe is not only driven by the open source community but by Pivotal. Steeltoe provides the quick and proven implementations of core cloud concepts like circuit breaking, service discovery, and config server. Because it is open source, the community provides up to date documentation and code samples on how to implement the features it offers. PCF helps with operator efficiency with a highly automated platform and provides support for the operating systems.

Getting Started

For most companies, the first step is to replatform. Once your app has been replatformed, the next step is to analyze the functionality of the application. This will determine how to decompose the application into smaller units. These units will build a list of functionalities to be moved to smaller microservices ready for use by the application.

In some cases companies will have functionality that crosses multiple apps. If a microservice exists that does what you need it to do, then look to use that microservice. Sometimes it takes no changes to use this microservice. Think about a service that sends email – straightforward and probably will not need any changes to use. But if you think about a service that updates user preferences, this might need to be modified. In most cases that microservice will take a little modification to consume. This evaluation should be straightforward and take into consideration any other applications currently using it.





The beauty of microservices is the word “micro.” The service should be small, paring teams that tackle a microservice down to two or three developers. A new microservice shouldn't take more than a few weeks to complete with testing. If you find your service is taking longer than that to write, then you should reevaluate the functionality in it. If possible, the functionality should be tested in parallel, comparing the results from the original application to the results of the new microservice. After testing to ensure the microservice is returning the expected results, sizing the container should be completed. The platform can show some metrics on things like disk, memory, and CPU usage. These metrics can set a baseline when deploying your microservice, making sure there isn't any over- or under-allocation of resources.

Overcoming Analysis Paralysis

If these are new concepts for you, don't worry. What you want to avoid is stunting your organization's future and operational efficiency by overlooking PCF as an option. Try not to get too bogged down in analysis paralysis, where you try to master every detail yourself, get confused, and can't move forward.

Looking Ahead – With Magenic

Magenic focuses on educating our clients to understand the value of what they own, what it does, how to properly invest, defining business goals, and what kind of cultural changes need to happen in order to move faster.

To learn more about what it takes to accelerate cloud modernization using PCF, check out our [Cloud Readiness Assessment](#).



About Magenic

Magenic is the digital technology consulting company built for speed. We have the right digital strategies, the right process, and the right people to get our clients' digital products to market faster.

Visit us at magenic.com or call us at [877.277.1044](tel:877.277.1044) to learn more or to engage Magenic today.



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