

# .NET on CF Capabilities & Roadmap

Pivotal Software, Inc.

March 2016

Zach Brown

Strategic Product Owner, Pivotal Cloud Foundry

I appreciate feedback from CF users!

[zbrown@pivotal.io](mailto:zbrown@pivotal.io)



@moredeploys



# Agenda

- Pivotal's Strategy for .NET Support
- CF Support for .NET
  - Windows 2012 R2
  - ASP.NET Core
- What's Next?
  - BOSH-Windows
  - Steel Toe

# Surprising things are Happening in Redmond

- .NET Core on Linux/OS X
- SQL Server on Linux <sup>[1]</sup>
- MS joins Eclipse Foundation <sup>[2]</sup>
- CF on Azure GA <sup>[3]</sup>



[1] <https://blogs.microsoft.com/blog/2016/03/07/announcing-sql-server-on-linux/>

[2] <http://techcrunch.com/2016/03/08/microsoft-joins-the-open-source-eclipse-foundation/>

[3] <https://azure.microsoft.com/en-us/blog/general-availability-of-cloud-foundry-and-preview-access-of-pivotal-cloud-foundry/>

# Pivotal's .NET Strategy

- Pivotal is committed to making Cloud Foundry **the best platform** for .NET applications today and in the future
- And we have cultivated a **strong partnership** and alignment with Microsoft

# Two Choices

Today, there are 2 ways to run .NET on CF:

- **Windows 2012 R2**
  - Using Diego-Windows and Garden-Windows
  - Supports .NET SDK 3.5 – 4.5+, WebForms
- **ASP.NET Core on Linux**
  - Using CF Community Buildpack: ASP.NET 5

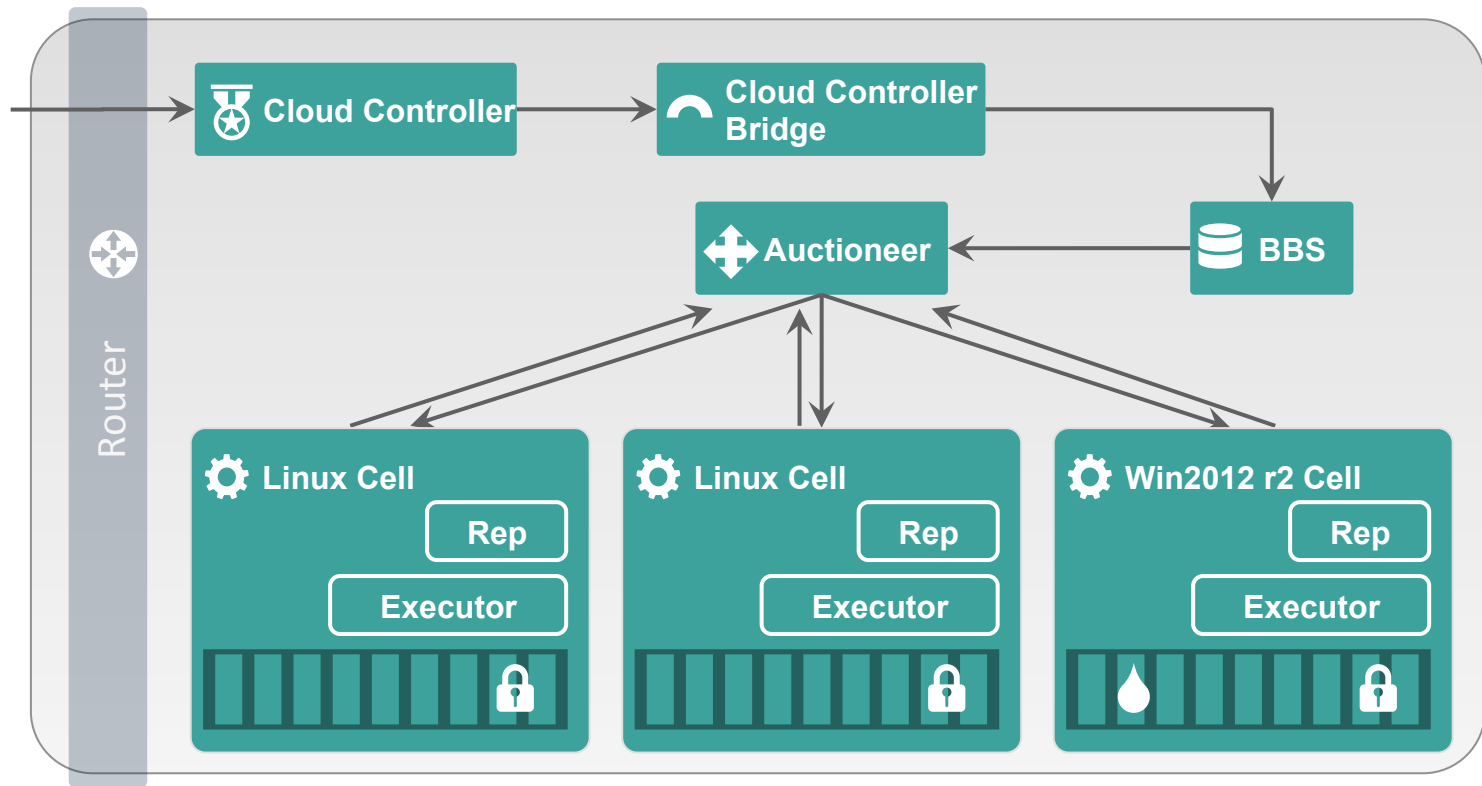
# When to choose which?

- Replatforming/Migrating Existing apps → .NET 4.x on Win
- Greenfield Applications → Try “Core First” Approach
- Dependencies and framework requirements probably dictate choice
  - Web API, ASP.NET MVC = ok
  - WebForms, SignalR = 4.x only (for now)

# Deploying a .NET application to Windows

```
cf push mydotNetApp  
-s windows2012R2  
-b binary_buildpack
```

Specify the stack,  
and the binary bp

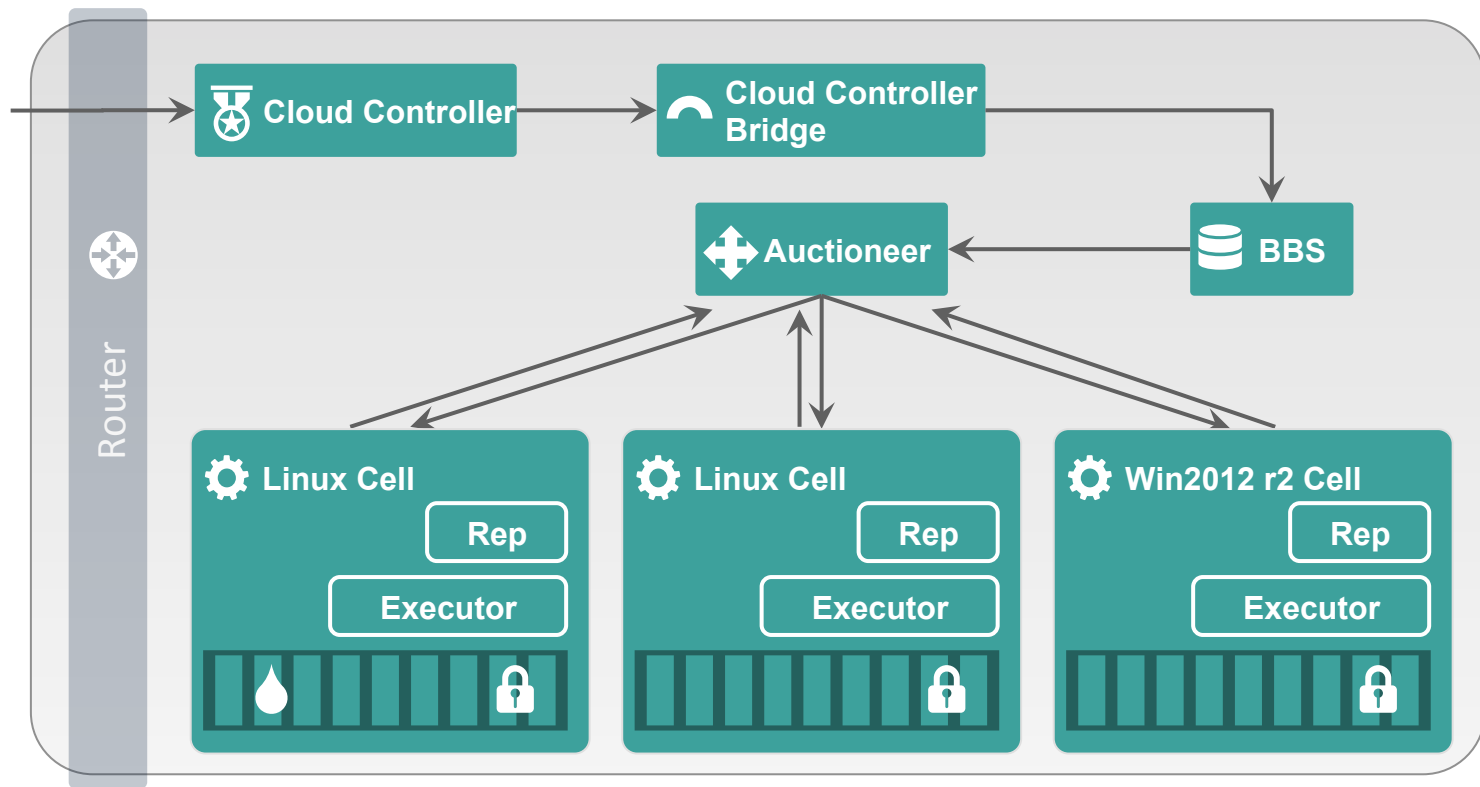




# Deploying a .NET Core application to Linux

```
cf push mydotNetApp  
-s cflinuxfs2  
-b <asp.net5 bp>
```

Specify the stack,  
and the ASP.NET  
Core bp



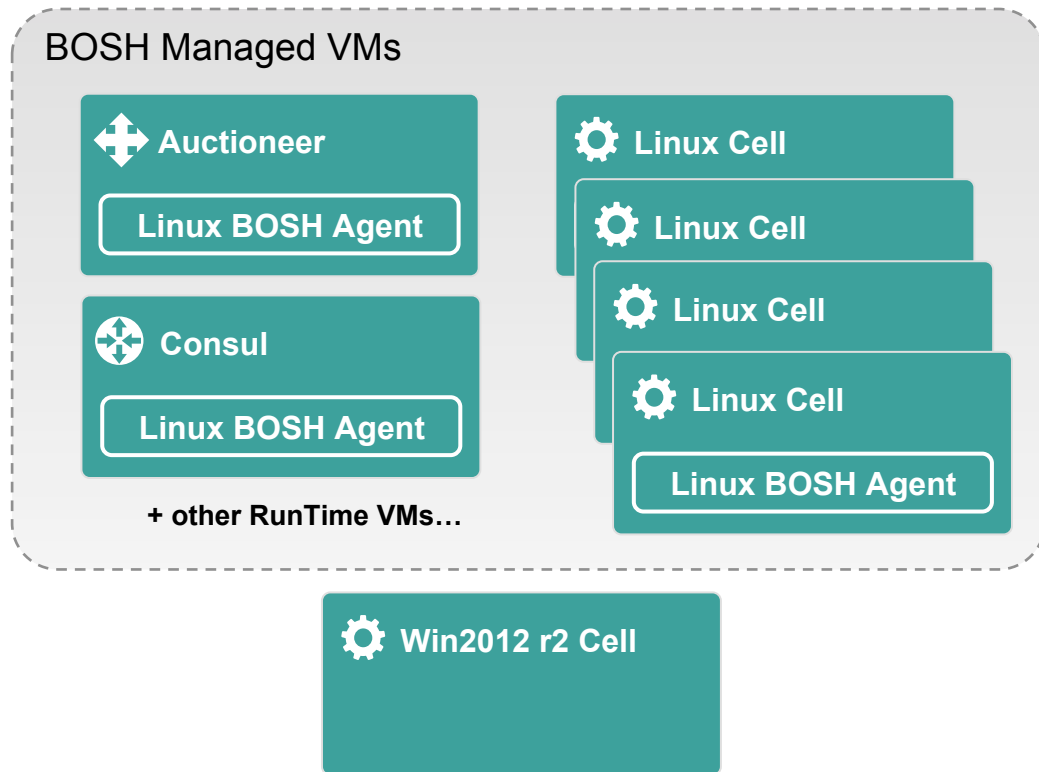
# Resources

- Garden-Windows Container Project repo  
<https://github.com/cloudfoundry/garden-windows>
- Diego-Windows Project repo  
<https://github.com/cloudfoundry/diego-windows-release>
- CF Community ASP.NET 5 (Core) Buildpack  
<https://github.com/cloudfoundry-community/asp.net5-buildpack>

# What's Next?

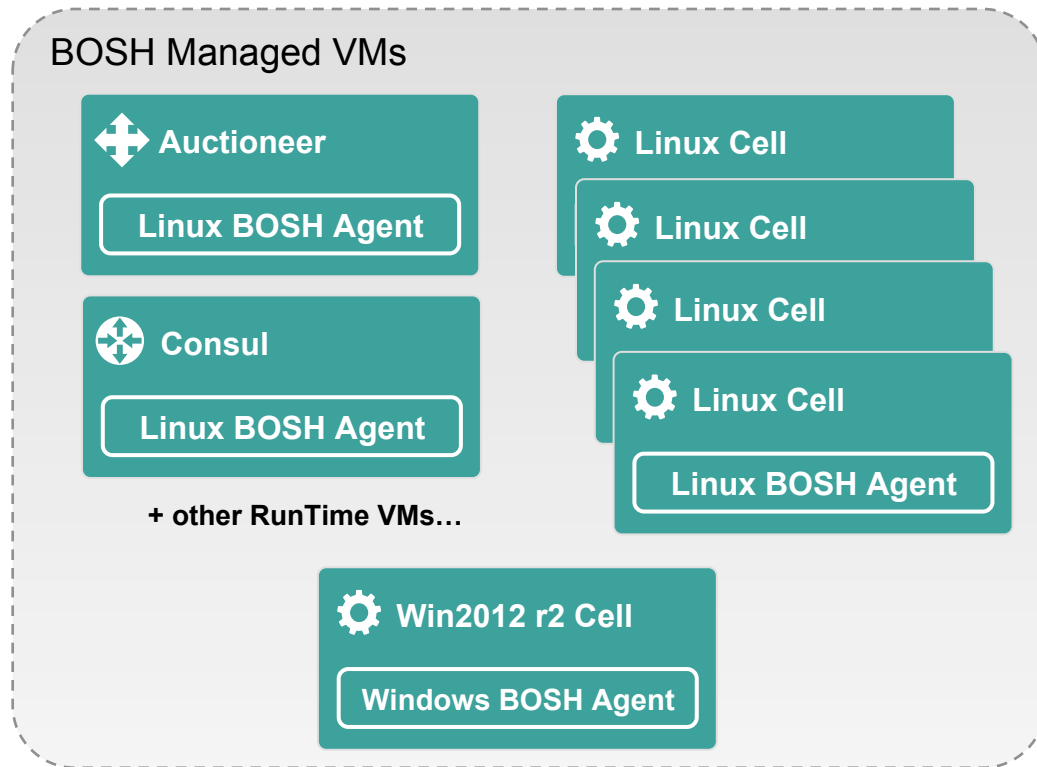
BOSH-Windows

# Diego Windows Today



- Windows VMs provisioned outside BOSH/CF
- Scripted MSI installs Diego-Windows and Garden-Windows, and registers Cells with Auctioneer, Consul

# BOSH Windows (coming soon)



- All VMs provisioned by BOSH
- Windows Stemcell inc. BOSH-Agent for Windows
- Add Windows capacity through BOSH manifest or Ops Manager UI

# BOSH-Windows Resources

Find out more about BOSH-Windows

- BOSH-Windows Pivotal Tracker (public)  
<https://www.pivotaltracker.com/n/projects/1479998>
- BOSH-Windows Project repo  
<https://github.com/cloudfoundry/bosh-agent>

# What's Next?

Steel Toe

# What is Steel Toe?

Steel Toe is an open-source project to make the Spring Cloud server components consumable from .NET applications with an idiomatic .NET experience

- Config Server + Auto-refresh
- Service Registration/Discovery (Eureka)
- Circuit Breaker (Hystrix)





# Milestone 1 (MVP)

Targeting April 2016 release

- VCAP Parser / IOOptions injector
- Config Server Client
- Snazzy ascii banner



# What's Next?

- Service Discovery (Eureka) Client
- Ribbon
- Hystrix

Steel Toe is an OSS project

- GitHub - <https://github.com/SteelToeOSS>
- Web - <http://steeltoe.io/>

Pivotal®