
Make your system administrator friendly with PowerShell

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Agenda

- + What is PowerShell and why should I care?
- + Fundamentals
- + Administering a web application using PowerShell
- + Wrap up



Espresso

Fork me on GitHub



A lightweight Markdown-based
sample **blog engine**
built using ASP.NET MVC 3



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Technology Radar



Techniques

- ▲ 1. Progressive enhancement
- ▲ 2. Automate database deployment
- 3. Platform roadmaps
- 4. Evolutionary database
- 5. Emergent design
- 6. Visualization and metrics
- 7. Coding architects
- ▲ 8. Evolutionary architecture
- ▲ 9. DevOps
- ▲ 10. Simple performance trending
- ▲ 11. Continuous delivery
- 12. Concurrency abstractions and patterns
- 13. Acceptance test of journeys
- 14. Categorization & prioritization of technical debt
- 15. Continuous deployment
- 16. Capability modeling
- ▲ 17. Thoughtful caching
- ▲ 18. Iterative data warehousing
- ▲ 19. Build your own radar
- ▲ 20. Event API's
- ▲ 21. Event driven business intelligence
- 22. Smart systems
- ▲ 23. Event sourcing
- ▲ 24. Decision driven BI
- 25. Scrum certification
- 26. Database based integration
- ▲ 27. Procedure oriented integration
- ▲ 28. Feature branching
- ▲ 29. Manual infrastructure management

Tools

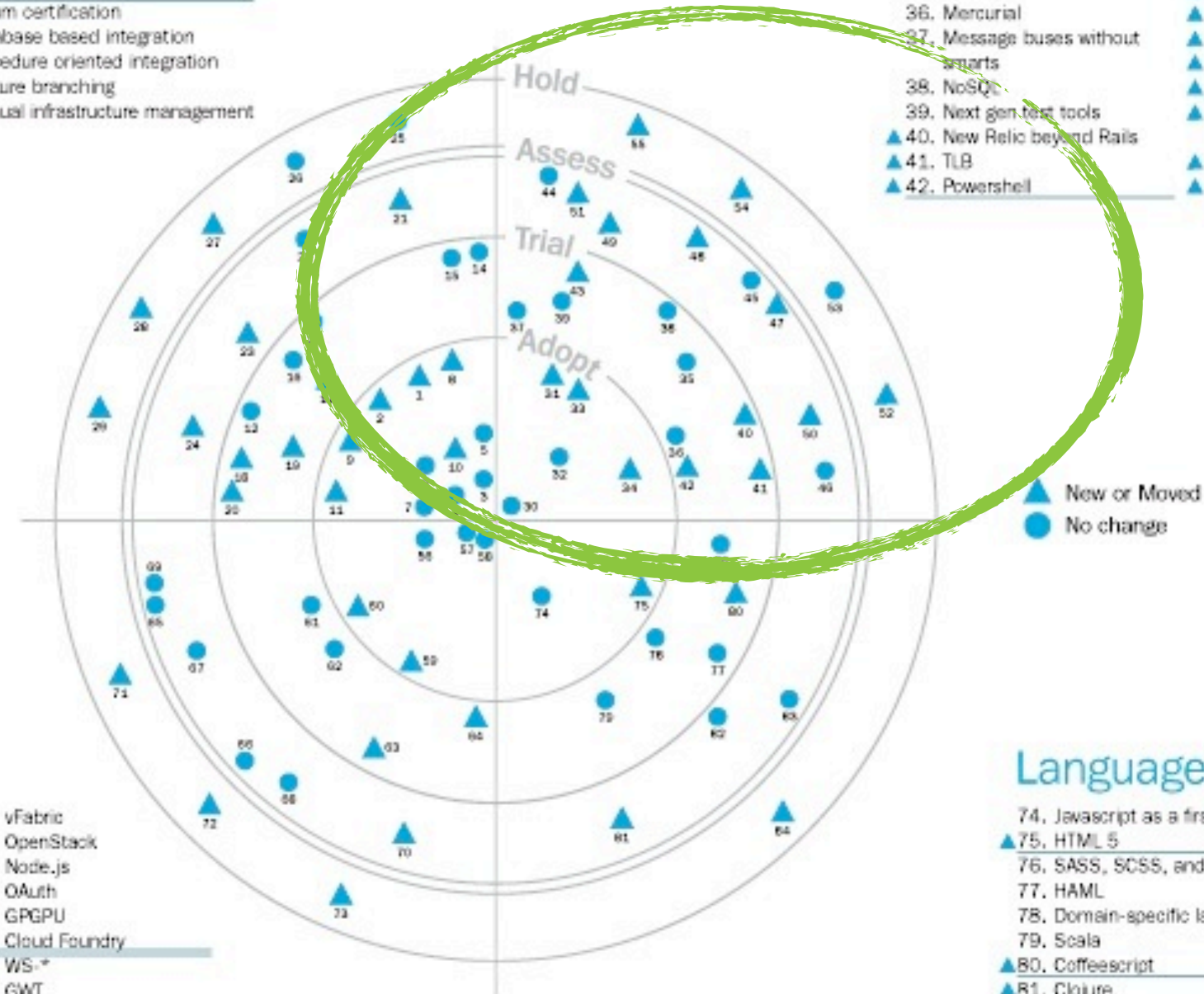
- 30. Subversion
- ▲ 31. Git
- 32. Infrastructure as code
- ▲ 33. Github
- ▲ 34. Caching reverse proxies
- 35. Splunk
- 36. Mercurial
- 37. Message buses without smarts
- 38. NoSQL
- 39. Next gen test tools
- ▲ 40. New Relic beyond Rails
- ▲ 41. TLB
- ▲ 42. Powershell
- ▲ 43. Selenium 2 testing of mobile websites
- 44. Deltacloud
- 45. Vagrant
- 46. API management services
- ▲ 47. jQuery Mobile
- ▲ 48. Backbone.js
- ▲ 49. Sonar
- ▲ 50. Open source BI tools
- ▲ 51. Gradle
- ▲ 52. Cross platform mobile toolkits
- 53. ESB
- ▲ 54. VCS with "implicit workflow"
- ▲ 55. Code in configuration

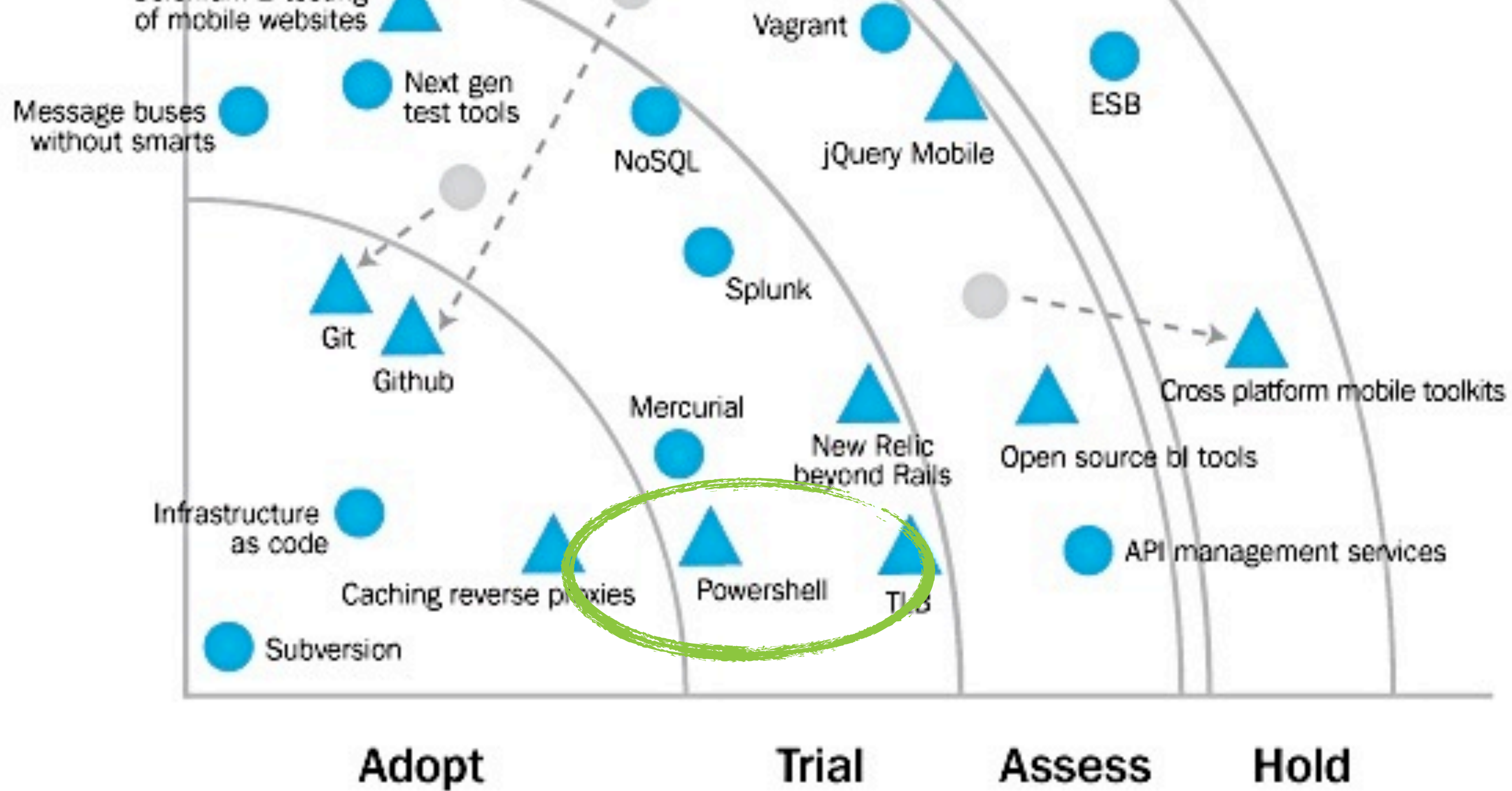
Platforms

- 56. JRuby
- 57. ATOM
- 58. KVM
- ▲ 59. AWS
- ▲ 60. Mobile web
- 61. Heroku
- 62. Tablet (formerly iPad)
- ▲ 63. Offline mobile webapps (just html5)
- ▲ 64. Ubiquitous computing
- 65. vFabric
- 66. OpenStack
- 67. Node.js
- 68. OAuth
- 69. GPGPU
- ▲ 70. Cloud Foundry
- ▲ 71. WS-*
- ▲ 72. GWT
- ▲ 73. Java portal servers

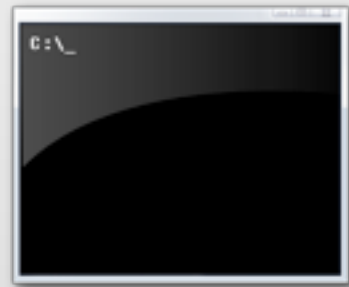
Languages

- 74. Javascript as a first class language
- ▲ 75. HTML 5
- 76. SASS, SCSS, and LESS
- 77. HAML
- 78. Domain-specific languages
- 79. Scala
- ▲ 80. Coffeescript
- ▲ 81. Clojure
- 82. F#
- 83. Future of Java
- ▲ 84. Logic in stored procedures





History



1981
MS-DOS



1998
WSH



2006
PowerShell



PowerShell in a nutshell

- + The Unix-like administrative framework for Windows
- + Has both a **command shell** and a **scripting language**
- + Built on top of .NET
- + Extensible



Why PowerShell

- + Arcane MSI packages
- + Understandable install **scripts**
- + Biblical maintenance documents
- + Automated administrative **tasks**
- + Screaming IT staff
- + Built-in system **diagnostics**



Architecture



Runtime and Cmdlets



Key features

- + Convention based syntax
- + Object **pipeline**
- + Dynamically typed scripting language
- + Integration with the .NET Framework



It can run...

- + **Cmdlets** written in any .NET language
- + **Scripts** written in PowerShell's own scripting language
- + **Executables**



Anatomy of a cmdlet

```
PS> Get ChildItem -Path C:\
```

Verb Noun Parameter

The sequential pipeline

```
PS> Get-Item | Format-List
```



Where is PowerShell used?



If Metro is the new UI for Windows,
then PowerShell is the "new UI"
for Windows Server

— Rob Helm via Twitter

Learn more

+ PowerGUI

<http://powergui.org>

+ PowerShell Survival Guide

<http://bit.ly/powershellguide>

+ Master-PowerShell

<http://bit.ly/masterpowershell>



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Questions?



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