

Terraforming the world

Ain't no such thing as halfway DevOps..

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SixPivot



NDC { Sydney }
17-21 September 2018

#dddbne

Jeremy Cade

Chief Troublemaker

... and some other things*

www.jeremycade.com

@jcade83 #dddbne

*I build stuff



WARNING
STRONG OPINIONS
THIS WAY COMES

A Recipe for Automation

**1 half-cup of “Continuous
Integration”**



Jenkins

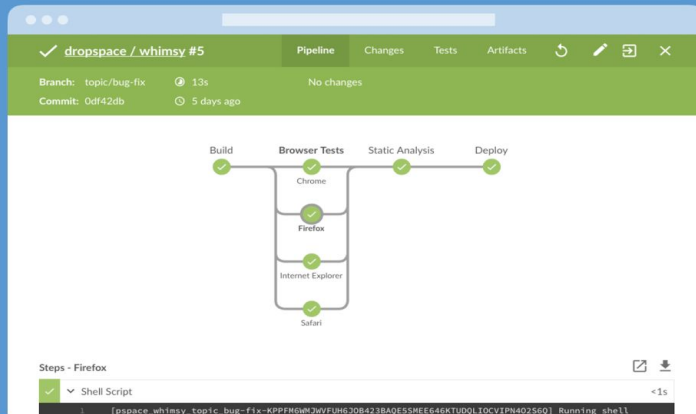
Build great things at any scale

The leading open source automation server, Jenkins provides hundreds of plugins to support building, deploying and automating any project.

[Documentation](#)[Download](#)

Say “hello” to Blue Ocean

Blue Ocean is a new user experience that puts Continuous Delivery in reach of any team — without sacrificing the power and sophistication of Jenkins.

[Get started](#)

Continuous Integration and Continuous Delivery

As an extensible automation server, Jenkins can be used as a simple CI server or turned into the continuous delivery hub for any project.



Easy installation

Jenkins is a self-contained Java-based program, ready to run out-of-the-box, with packages for Windows, Mac OS X and other Unix-like operating systems.



Easy configuration

Jenkins can be easily set up and configured via its web interface, which includes on-the-fly error checks and built-in help.

EXPLORER

Jenkinsfile

LUP.HECTORTHEBULLDOG

.vscode

artifacts

infrastructure

azure

terraform

scripts

src

test

tools

.gitignore

build.cake

build.ps1

build.sh

GitVersion.yml

Jenkinsfile

Lup.HectorTheBulldog.sln

NuGet.config

README.md

run.ps1

run.sh

setup.ps1

setup.sh

Jenkinsfile

node {
 slackSend channel: '#dev-builds', message: "Started - \${env.JOB_NAME} \${env.BUILD_NUMBER}. See \${env.RUN_DISPLAY_URL} for more details."
 try {
 stage ("Checkout") {
 checkout scm

 if (!env.BRANCH_NAME.startsWith("pr")) {
 if (isUnix()) {
 sh "git checkout \${env.BRANCH_NAME}"
 }
 else {
 bat "git checkout \${env.BRANCH_NAME}"
 }
 }

 stage ("Setup") {
 echo 'Checking for Build Dependencies'

 if (isUnix()) {
 sh './setup.sh'
 }
 else {
 bat 'powershell .\\setup.ps1'
 }
 }

 stage ("Build") {
 if (isUnix()) {
 sh './build.sh'
 }
 else {
 bat 'powershell .\\build.ps1'
 }
 }

 stage ("Unit Testing") {
 // Publish Test Results
 step ([class: "XUnitPublisher",
 tools: [
 [class: "XUnitDotNetTestType", pattern: "test/**/TestResult.xml", skipNoTestFiles: false, stopProcessingIfError: true]
])
 }

 stage ("Archive") {
 if (env.BRANCH_NAME == 'master') {
 // Archive Packages on Jenkins
 archiveArtifacts "artifacts/"
 }
 }

 slackSend channel: '#dev-builds', color: 'good', message: "Succeeded - \${env.JOB_NAME} \${env.BUILD_NUMBER}. See \${env.RUN_DISPLAY_URL} for more
 }

8

develop

0 0 1 4

groovy | Jenkinsfile

Jeremy Cade, 10 months ago

Ln 21, Col 1

Spaces: 4

UTF-8

LF

Groovy

Branch: develop [↗](#)

🕒 1m 37s

Changes by Jeremy Cade

Commit: 3681a58

🕒 16 hours ago

Branch event



Steps Archive



✓	> Send Slack Message	1s
✓	> Delete workspace when build is done	<1s

A sprinkling of “Clouds*”

*Yes.. Plural

Microsoft Azure Cloud Comput... x

Secure | https://azure.microsoft.com/en-au/


Microsoft Azure

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Your vision, your results,
your cloud




Amazon Web Services (AWS) x

Secure | https://aws.amazon.com

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The Next Generation of AWS Compute
EC2 bare metal instances, Elastic Container Service for
Kubernetes & new pricing model for EC2 Spot

Learn more »



500g of “Infrastructure as Code”



Write, Plan, and Create Infrastructure as Code

[GET STARTED](#)[DOWNLOAD 0.11.1](#)[FIND MODULES](#)

SIMPLE AND POWERFUL

Terraform enables you to safely and predictably create, change, and improve infrastructure. It is an open source tool that codifies APIs into declarative configuration files that can be shared amongst team members, treated as code, edited, reviewed, and versioned.

[WRITE](#)[PLAN](#)[CREATE](#)

EXPLORER

OPEN EDITORS

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CENTER

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run.sh

setup.ps1

setup.sh

az.appservice.apps.tf x

Jeremy Cade, 22 hours ago | 1 author (Jeremy Cade)

1 resource "azurerm_app_service" "hectorthebulldog" {

2 name = "\${var.application_name}"

3 location = "\${azurerm_resource_group.hectorthebulldog.location}"

4 resource_group_name = "\${azurerm_resource_group.hectorthebulldog.name}"

5 app_service_plan_id = "\${azurerm_app_service_plan.hectorthebulldog.id}"

6 client_affinity_enabled = false

7

8 site_config {

9 dotnet_framework_version = "v4.0"

10 always_on = true

11 use_32_bit_worker_process = false

12 }

13

14 app_settings {

15 "ASPNETCORE_ENVIRONMENT" = "Production"

16 }

17 }

18

az.appservice.tf x

Jeremy Cade, 22 hours ago | 1 author (Jeremy Cade)

1 resource "azurerm_app_service_plan" "hectorthebulldog" {

2 name = "\${var.application_name}"

3 location = "\${var.az_location}"

4 resource_group_name = "\${azurerm_resource_group.hectorthebulldog.name}"

5

6 sku {

7 tier = "Standard"

8 size = "S1"

9 }

10 }

11

az.resourcegroup.tf x

Jeremy Cade, 22 hours ago | 1 author (Jeremy Cade)

1 resource "azurerm_resource_group" "hectorthebulldog" {

2 name = "\${var.application_name}"

3 location = "\${var.az_location}"

4 }

5

Jeremy Cade, 22 hours ago • 61D-994 - Initial infrastructure code for Azure App Service

Ln 1, Col 1 Spaces: 2 UTF-8 LF Terraform

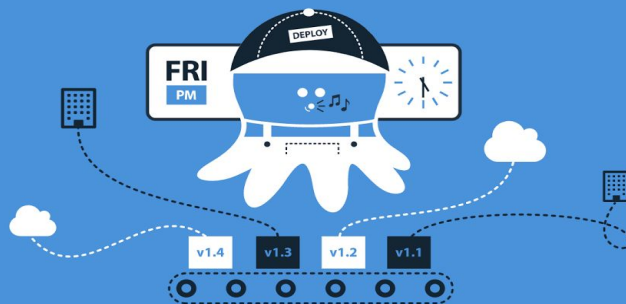
14

500g of a “Friendly Deployment Automation Tool*”

*If you don't know.. You better ask somebody.

Fast, repeatable, reliable deployments

Octopus takes over where your Continuous Integration server ends, enabling you to easily automate even the most complicated application deployments, whether on-premises or in the cloud.

[Download](#)
[Watch video](#)


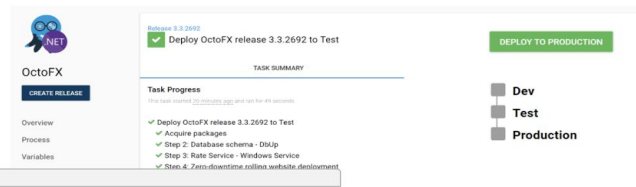
New! Octopus 4.0 is is production ready and you can start using it today. [Learn what's new.](#)

Promote releases between environments

Octopus takes care of your dev, QA, acceptance testing and production deployments. Limit who can deploy to production, ensure releases have been tested first, schedule deployments for later tonight, or block promotion of broken releases.



Release	Dev	Test	Production
3.3.2690	✓ 3.3.2690 November 20th 2017	✓ 3.3.2690 November 20th 2017	DEPLOY
3.3.2689	✓ 3.3.2689 November 20th 2017	✓ 3.3.2689 November 20th 2017	DEPLOY
3.3.2616	✓ 3.3.2616 November 17th 2017	✓ 3.3.2616 November 17th 2017	✓ 3.3.2616 November 17th 2017
3.3.2126	✓ 3.3.2126 October 27th 2017	✓ 3.3.2126 October 27th 2017	✓ 3.3.2126 October 27th 2017



Repeatable & reliable deployments

For each release, you'll build your binaries once, but deploy and promote them many times, ensuring that what goes to production is exactly what you just tested. The way we model your deployment process ensures that deployments are as consistent as possible between environments, so that

Pepe Le Pew	<div>✓</div> 0.1.2-ci0007 November 29th 2017	<div>✓</div> 0.1.1 November 22nd 2017
Theodore Tasmanian	<div>✓</div> 0.1.4-ci0474 November 30th 2017	<div>✓</div> 0.1.4-ci0466 November 29th 2017
Theodore Tasmanian API	<div>✓</div> 0.1.0-ci0037 November 29th 2017	<div>✓</div> 0.1.0-ci0027 November 27th 2017

02. Looney Tunes Azure	Staging	Production
Cecil Turtle	<div>✓</div> 0.1.2-ci0001 September 26th 2017	<div>✓</div> 0.1.2-ci0001 September 26th 2017
Daffy Duck	<div>✓</div> 0.1.1-ci0006 October 26th 2017	<div>✓</div> 0.1.1-ci0006 October 26th 2017
Hector The Bulldog	<div>✓</div> 0.8.15 December 1st 2017	<div>✓</div> 0.8.15 December 1st 2017
Hubie	<div>✓</div> 0.3.9-ci0034 November 29th 2017	<div>✓</div> 0.3.9-ci0022 November 22nd 2017
Marvin The Martian	<div>✓</div> 0.1.0-ci0018 November 30th 2017	
Peter Puma	<div>✓</div> 0.1.6-ci0004 October 26th 2017	<div>✓</div> 0.1.6-ci0004 October 30th 2017
Tweety Bird	<div>✓</div> 0.2.10-ci0004 November 16th 2017	<div>✓</div> 0.2.10-ci0004 October 24th 2017
Witch Hazel	<div>✓</div> 0.1.5 September 26th 2017	<div>✓</div> 0.1.5 October 3rd 2017
Yosemite Sam	<div>✓</div> 0.5.6-ci0015-b November 29th 2017	<div>✓</div> 0.5.5 November 14th 2017

05: Expo News AWS	Staging	Production
Event App Service	<div>✓</div> 1.1.5-ci0011 October 18th 2017	

Projects



Hector The Bulldog

CREATE RELEASE

Overview

Process

Variables

Triggers

Channels

Releases

Settings




Authentication and
Authorisation as a Service

Process

REORDER STEPS

ADD STEP



- 
1. Swap Deployment Slot
 Run a PowerShell script using an Azure subscription with Azure modules loaded on behalf of targets in role **AppService**
 Production
- 
2. Deploy to App Service
 Deploy an Azure Web App **Lup.HectorTheBulldog.Service** from **Octopus Server (built-in)** on behalf of targets in role **AppService**
- 
3. Slack - Detailed Notification
 Run a script on the Octopus Server on behalf of targets in role **AppService**

Lifecycle

Lifecycles can be defined in the [Library](#)

Lüp Implicit Deployment

QA / Staging

Staging

Production

CHANGE

Script modules

No script modules have been included

Modules can be created in the [Library](#)

INCLUDE

1 tbl spoon of an “Application”



Login to Lüp

Log In

[Forgot your password?](#)

2017 © Lüp
Production RD0003FF6F0CE2 0.8.15.0
Last deployed: 16 hours ago

Add “Cake” to bind it all together.

What is Cake?

Cake (C# Make) is a cross platform build automation system with a C# DSL to do things like compiling code, copy files/folders, running unit tests, compress files and build NuGet packages.

Get Started »

Familiar

Cake is built on top of the Roslyn compiler which enables you to write your build scripts in C#.

Cross platform

Cake is available on Windows, Linux and macOS.

Reliable

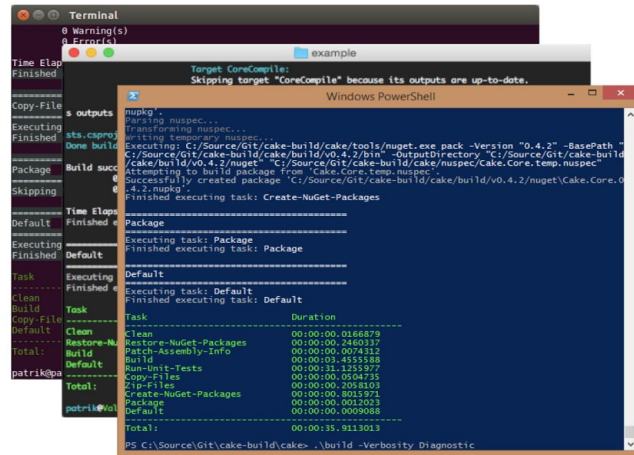
Regardless if you're building on your own machine, or building on a CI system such as AppVeyor, TeamCity, TFS, VSTS or Jenkins, Cake is built to behave in the same way.

Batteries included

Cake supports the most common tools used during builds such as MSBuild, MSTest, xUnit, NUnit, NuGet, ILMerge, WiX and SignTool out of the box.

Open source

We believe in open source and so should you. The source code for Cake is [hosted on GitHub](#) and includes everything needed to build it yourself.



EXPLORER

OPEN EDITORS

build.cake

LUP.HECTORTHEBULLDOG

.vscode

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NuGet.config

README.md

run.ps1

run.sh

setup.ps1

setup.sh

build.cake x

```
1  Jeremy Cade, 18 hours ago | 2 authors (Jeremy Cade and others)
2  /*****
3  * I DONT LIKE REGIONS.. BUT.. DEMO READABILITY!
4  *****/
5  #region Namespaces, Tooling & Cake Addins
6  /*****
7  * Namespaces, Tooling & Cake Addins
8  *****/
9
10 // Tools
11 #tool "nuget:?package=GitVersion.CommandLine"
12 #tool "nuget:?package=OctopusTools"
13
14 // Cake Addins
15 #addin nuget:https://coyote.lup.com.au/nuget?package=Cake.Terraform&version=0.1.1
16
17 // Namespaces
18 using System.Xml;
19 using System.Xml.Linq;
20 #endregion
21
22 #region Variables, Environment, Setup stuffs. Jeremy Cade, 24 hours ago • GID-966 - Add Terraform & Setup steps to Cake & Jenkinsfile
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57 #region Application Build & Test-
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232
233
234 /*****
235 * Default Build Target
236 *****/
237 Task("Default")
238     .IsDependentOn("Clean")
239     .IsDependentOn("Apply")
240     .IsDependentOn("Build")
241     .IsDependentOn("Test")
242     .IsDependentOn("Release")
243     .Does(() => {
244         Information("Finished building version: {0}", nugetVersion);
245     });
246
247 RunTarget(target);
```

Ln 22, Col 46 Spaces: 4 UTF-8 LF C# Switch projects

EXPLORER

OPEN EDITORS

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LUP.HECTORTHEBULLDOG

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build.cake x

Jeremy Cade, 18 hours ago | 2 authors (Jeremy Cade and others)

1 /*****

2 * I DONT LIKE REGIONS.. BUT.. DEMO READABILITY!

3 *****/

4

5 #region Namespaces, Tooling & Cake Adds--

21

22 #region Variables, Environment, Setup stuffs.

23 /*****

24 * Variables, Environment, Setup stuffs.

25 *****/

26

27 // Build Configuration

28 var configuration = Argument("configuration", "Release");

29

30 // Targets

31 var target = Argument("target", "Default");

32

33 // Git Version \\(^.^)//

34 var gitVersionInfo = GitVersion(new GitVersionSettings {

35 ... OutputType = GitVersionOutput.Json

36 });

37

38 // Local Variables..

39 var isMasterBranch = gitVersionInfo.BranchName == "master" ? true : false;

40 var isContinuousIntegrationBuild = !BuildSystem.IsLocalBuild;

41

42 // Package Version Jeremy Cade, 6 months ago * Migrated to .NET 1.1 CLI and Updated to IdSrv4 1.5.2

43 var nugetVersion = gitVersionInfo.NuGetVersion;

44

45 // Octopus API Key & Server Url

46 var octopusDeployApiKey = EnvironmentVariable("OCTOPUS_API") ?? "NO BUENOS";

47 var octopusDeployServer = EnvironmentVariable("OCTOPUS_SERVERURL") ?? "NO BUENOS";

48

49 // Artifacts Directory

50 EnsureDirectoryExists("./artifacts");

51

52 // Projects that are going to be published.

53 var projectsToPublish = new[] { "Lup.HectorTheBulldog.Service" };

54

55 #endregion

56

57 #region Application Build & Test--

189

190 #region Terraform Infrastructure--

232

233

234 /***** --

237 Task("Default")

238 ... IsDependentOn("Clean")

239 ... IsDependentOn("Apply")

240 ... IsDependentOn("Build")

241 ... IsDependentOn("Test")

242 ... IsDependentOn("Release")

243 ... Does() => {

develop

0 0 1 3

csharp | build.cake

Jeremy Cade, 6 months ago

Ln 42, Col 11

Spaces: 4

UTF-8

LF

C#

Switch projects

25

EXPLORER

OPEN EDITORS 1 UNSAVED

build.cake

LUP.HECTORTHEBULLDOG

.vscode

artifacts

infrastructure

scripts

src

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NuGet.config

README.md

run.ps1

run.sh

setup.ps1

setup.sh

build.cake

```
57 #region Application Build & Test
58 /*****
59  * Application Build & Test
60  *****/
61
62 Task("Clean") -
63 );
64
65 Task("Build") -
66 );
67
68 Task("SetVersion") -
69 );
70
71 Task("Restore") -
72 );
73
74 Task("Test") -
75 );
76
77 Task("Release")
78 {
79     .IsDependentOn("Publish")
80     .WithCriteria(isContinuousIntegrationBuild)
81     .WithCriteria(isMasterBranch)
82     .Does(() =>
83     {
84         foreach(var project in projectsToPublish)
85         {
86             string path = string.Format("./src/{0}/bin/{1}/netcoreapp1.1/publish", project, configuration);
87             string artifact = string.Format("./artifacts/{0}.{1}.zip", project, nugetVersion);
88             Zip(path, artifact);
89             OctoPush(octopusDeployServer, octopusDeployApiKey, artifact, new OctopusPushSettings
90             {
91                 ReplaceExisting = true
92             });
93         }
94     });
95 }
96
97 Task("Publish")
98 {
99     .WithCriteria(isContinuousIntegrationBuild)
100     .WithCriteria(isMasterBranch)
101     .Does(() =>
102     {
103         DotNetCorePublish(".", new DotNetCorePublishSettings
104         {
105             Configuration = configuration
106         });
107     });
108 }
109 #endregion
110
111 #region Terraform Infrastructure -
```

Ln 188, Col 3

Spaces: 4

UTF-8

LF

C#

Switch projects

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EXPLORER

1 UNSAVED

build.cake

LUP.HECTORTHEBULLDOG

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242

#region Application Build & Test-

#region Terraform Infrastructure

/* Infrastructure

// Working Directories For Terraform

var terraformDirectory = "./infrastructure/terraform";

// Where do we want to output the plan to

var terraformPlan = "Luphectorthebulldog.plan";

// We need to apply changes to the infrastructure

var terraformHasChanges = false;

Task("Plan")

....Does(() =>

{

.....TerraformInit(new TerraformInitSettings {

.....WorkingDirectory = terraformDirectory

.....});

.....terraformHasChanges = TerraformPlan(new TerraformPlanSettings {

.....WorkingDirectory = terraformDirectory,

.....OutFile = terraformPlan

.....});

.....});

Task("Apply")

....WithCriteria(isContinuousIntegrationBuild)

....WithCriteria(isMasterBranch)

....IsDependentOn("Plan")

....Does(() =>

{

.....if (terraformHasChanges) {

.....TerraformApply(new TerraformApplySettings {

.....WorkingDirectory = terraformDirectory,

.....Plan = terraformPlan,

.....AutoApprove = true

.....});

.....}

.....});

#endregion

/* Default Build Target

Task("Default")

....IsDependentOn("Clean")

....IsDependentOn("Apply")

....IsDependentOn("Build")

....IsDependentOn("Test")

Ln 57, Col 33

Spaces: 4

UTF-8

LF

C#

Switch projects

27

**Place in a fan forced oven at 150°C
for 20 mins**

```

51  Terraform has been successfully initialized!
52  Refreshing Terraform state in-memory prior to plan...
53  The refreshed state will be used to calculate this plan, but will not be
54  persisted to local or remote state storage.
55
56  data.aws_route53_zone.lupcomau: Refreshing state...
57  azurerm_resource_group.hectorthetbulldog: Refreshing state... (ID: /subscriptions/a2a4c602-8e91-4c47-b21c-...50/resourceGroups/lup-hectorthetbulldog)
58  azurerm_app_service_plan.hectorthetbulldog: Refreshing state... (ID: /subscriptions/a2a4c602-8e91-4c47-b21c-...t.Web/serverfarms/lup-hectorthetbulldog)
59  aws_route53_record.production_security: Refreshing state... (ID: ZCJ72SX4JKFW0_security.lup.com.au._CNAME)
60  aws_route53_record.staging_login: Refreshing state... (ID: ZCJ72SX4JKFW0_login.staging.lup.com.au._CNAME)
61  aws_route53_record.staging_security: Refreshing state... (ID: ZCJ72SX4JKFW0_security.staging.lup.com.au._CNAME)
62  aws_route53_record.production_login: Refreshing state... (ID: ZCJ72SX4JKFW0_login.lup.com.au._CNAME)
63  azurerm_app_service.hectorthetbulldog: Refreshing state... (ID: /subscriptions/a2a4c602-8e91-4c47-b21c-...crosoft.Web/sites/lup-hectorthetbulldog)
64
65  -----
66
67  An execution plan has been generated and is shown below.
68  Resource actions are indicated with the following symbols:
69  -/+ destroy and then create replacement
70
71  Terraform will perform the following actions:
72
73  -/+ azurerm_app_service.hectorthetbulldog (new resource required)
74
75  id: "/subscriptions/a2a4c602-8e91-4c47-b21c-247ea7a8f950/resourceGroups/lup-hectorthetbulldog/providers/Microsoft.Web/sites/lup-hectorthetbulldog" => <computed>
76  (forces new resource)
77  app_service_plan_id: "/subscriptions/a2a4c602-8e91-4c47-b21c-247ea7a8f950/resourceGroups/lup-hectorthetbulldog/providers/Microsoft.Web/serverfarms/lup-hectorthetbulldog" =>
78  "/subscriptions/a2a4c602-8e91-4c47-b21c-247ea7a8f950/resourceGroups/lup-hectorthetbulldog/providers/Microsoft.Web/serverfarms/lup-hectorthetbulldog"
79  app_settings.%: "1" => "1"
80  app_settings.ASPNETCORE_ENVIRONMENT: "Production" => "Production"
81  client_affinity_enabled: "true" => "false" (forces new resource)
82  connection_string.#: "0" => <computed>
83  enabled: "true" => "true"
84  location: "australiaeast" => "australiaeast"
85  name: "lup-hectorthetbulldog" => "lup-hectorthetbulldog"
86  resource_group_name: "lup-hectorthetbulldog" => "lup-hectorthetbulldog"
87  site_config.#: "1" => "1"
88  site_config.0.always_on: "true" => "true"
89  site_config.0.default_documents.#: "1" => "0"
90  site_config.0.default_documents.0: "hostingstart.html" => ""
91  site_config.0.dotnet_framework_version: "v4.0" => "v4.0"
92  site_config.0.local_mysql_enabled: "false" => <computed>
93  site_config.0.remote_debugging_enabled: "false" => "false"
94  site_config.0.use_32_bit_worker_process: "false" => "false"
95  site_config.0.websockets_enabled: "false" => <computed>
96  tags.%: "0" => <computed>
97
98  Plan: 1 to add, 0 to change, 1 to destroy.
99  Finished executing task: Plan
100
101  =====
102  Apply
103  =====
104  Skipping task: Apply
105
106  =====
107  SetVersion
108  =====
109  Executing task: SetVersion
110  Version Prefix is present, Setting 0.9.0
111  Version Suffix is present, Setting unstable.175
112  Finished executing task: SetVersion
113
114  =====

```

Ok Cool..
Where's the pain?
Well.. I'm glad you asked..

AZURE SUCKS*!

*With Terraform (Today)

- › azurerm_postgresql_server
- › azurerm_sql_database
- › azurerm_sql_elasticpool
- › azurerm_sql_firewall_rule
- › azurerm_sql_server

› DNS Resources

- › azurerm_dns_a_record
- › azurerm_dns_aaaa_record
- › azurerm_dns_cname_record
- › azurerm_dns_mx_record
- › azurerm_dns_ns_record
- › azurerm_dns_ptr_record
- › azurerm_dns_srv_record
- › azurerm_dns_txt_record
- › azurerm_dns_zone

› Key Vault Resources

- › azurerm_key_vault
- › azurerm_key_vault_certificate
- › azurerm_key_vault_key
- › azurerm_key_vault_secret

› Load Balancer Resources

- › azurerm_lb
- › azurerm_lb_backend_address_pool
- › azurerm_lb_rule
- › azurerm_lb_nat_rule
- › azurerm_lb_nat_pool
- › azurerm_lb_probe

› Messaging Resources

- › azurerm_eventgrid_topic
- › azurerm_eventhub
- › azurerm_eventhub_authorization_rule

Argument Reference

The following arguments are supported:

- **name** - (Required) Specifies the name of the resource to be created.
- **resource_group_name** - (Required) The name of the resource group in which to create the App Service Plan component.
- **location** - (Required) Specifies the supported Azure location where the resource exists. Changing this forces a new resource to be created.
- **app_service_plan_id** - (Required) The ID of the App Service Plan within which to create this App Service. Changing this forces a new resource to be created.
- **app_settings** - (Optional) A key-value pair of App Settings.
- **connection_string** - (Optional) An connection_string block as defined below.
- **client_affinity_enabled** - (Optional) Should the App Service send session affinity cookies, which route client requests in the same session to the same instance? Changing this forces a new resource to be created.
- **enabled** - (Optional) Is the App Service Enabled? Changing this forces a new resource to be created.
- **site_config** - (Optional) A site_config object as defined below.
- **tags** - (Optional) A mapping of tags to assign to the resource. Changing this forces a new resource to be created.

No Slots..
No Domains..

Changing this forces a new resource to be

connection_string supports the following:

- **name** - (Required) The name of the Connection String.
- **type** - (Required) The type of the Connection String. Possible values are APIHub, Custom, DocDb, EventHub, MySQL, NotificationHub, PostgreSQL, RedisCache, ServiceBus, SQLAzure and SQLServer.
- **value** - (Required) The value for the Connection String.

site_config supports the following:

- **always_on** - (Optional) Should the app be loaded at all times? Defaults to false.
- **default_documents** - (Optional) The ordering of default documents to load, if an address isn't specified

Base64

```

99 ~ aws_autoscaling_group.production-web-asp
100 launch_configuration: "Production - Launch Configuration20171129064742280200000001" => "${aws_launch_configuration.production-web.name}"
101
102 ~ aws_elb.public
103 tags.Version: "0.1.0-ci0266" => "0.1.1-beta0002"
104
105 -/+ aws_instance.db02 (new resource required)
106 id: "i-0a8a266ccce658db9" => <computed> (forces new resource)
107 ami: "ami-8e4849ed" => "ami-8e4849ed"
108 associate_public_ip_address: "false" => <computed>
109 availability_zone: "ap-southeast-2a" => <computed>
110 disable_api_termination: "true" => "false"
111 ebs_block_device.#: "2" => <computed>
112 ephemeral_block_device.#: "0" => <computed>
113 instance_state: "running" => <computed>
114 instance_type: "m4.2xlarge" => "m4.2xlarge"
115 ipv6_address_count: "0" => <computed>
116 ipv6_addresses.#: "0" => <computed>
117 key_name: "Lup_Production" => "Lup_Production"
118 monitoring: "true" => "true"
119 network_interface.#: "0" => <computed>
120 network_interface_id: "eni-eea68ba4" => <computed>
121 placement_group: "" => <computed>
122 primary_network_interface_id: "eni-eea68ba4" => <computed>
123 private_dns: "ip-10-1-1-6.ap-southeast-2.compute.internal" => <computed>
124 private_ip: "10.1.1.6" => "10.1.1.6"
125 public_dns: "" => <computed>
126 public_ip: "" => <computed>
127 root_block_device.#: "1" => <computed>
128 security_groups.#: "0" => <computed>
129 source_dest_check: "false" => "false"
130 subnet_id: "subnet-cb109dbd" => "subnet-cb109dbd"
131 tags.%: "5" => "5"
132 tags.Environment: "Production" => "Production"
133 tags.Management: "Terraform" => "Terraform"
134 tags.Name: "Production - DB02" => "Production - DB02"
135 tags.Role: "Database" => "Database"
136 tags.Version: "0.1.0-ci0266" => "0.1.1-beta0002"
137 tenancy: "default" => <computed>
138 user_data: "facb6297ce56911d583c48c33108df4c6452de5" => "fdb165e7b9dbb0955708d2e52d099f329a0622" (forces new resource)
139 volume_tags.%: "0" => <computed>
140 vpc_security_group_ids.#: "1" => "1"
141 vpc_security_group_ids.3443277935: "sg-fa3ee79d" => "sg-fa3ee79d"
142
143 -/+ aws_instance.management (new resource required)
144 id: "i-0d4c70cfc50a0d0ff" => <computed> (forces new resource)
145 ami: "ami-b07375d3" => "ami-b07375d3"
146 associate_public_ip_address: "true" => "true"
147 availability_zone: "ap-southeast-2a" => <computed>
148 ebs_block_device.#: "1" => <computed>
149 ephemeral_block_device.#: "0" => <computed>
150 instance_state: "running" => <computed>
151 instance_type: "t2.small" => "t2.small"
152 ipv6_address_count: "0" => <computed>
153 ipv6_addresses.#: "0" => <computed>
154 key_name: "Lup_Production" => "Lup_Production"
155 monitoring: "true" => "true"
156 network_interface.#: "0" => <computed>
157 network_interface_id: "eni-fd6a3eb7" => <computed>
158 placement_group: "" => <computed>
159 primary_network_interface_id: "eni-fd6a3eb7" => <computed>
160 private_dns: "ip-10-1-2-211.ap-southeast-2.compute.internal" => <computed>
161 private_ip: "10.1.2.211" => <computed>
162 public_dns: "ec2-13-54-249-85.ap-southeast-2.compute.amazonaws.com" => <computed>
163 public_ip: "13.54.249.85" => <computed>

```

You can blow away Production.

REALLY!!!
DON'T SHOOT YOURSELF IN THE
FOOT

Fill out your feedback

To go into the draw for prizes, please remember to complete your feedback at:

<http://www.dddbrisbane.com/feedback>

No feedback = No Prizes!



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