



## 65ª Reunião Presencial @ LISBOA

```
DateTime.Parse("26-11-2016", new CultureInfo("pt-PT"));
```

hashtag #netponto

# CAKE TASTING (C# MAKE)

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*It's not a party without Cake*

/me

.NET / C#, anyone?

# Build automation / CI, anyone?



Cake, anyone?

# Objectives

- Cake as an option for build automation
  - Fundamentals
  - Pros/cons
- Perform common .NET build tasks using Cake

# Describing builds – UI

- E.g.: Jenkins, TFS, VSTS.
- Specific to the build service; not shared.

**Build**

Execute Windows batch command

Command:

[See the list of available environment variables](#)

Build a Visual Studio project or solution using MSBuild

MSBuild Version:

MSBuild Build File:

Command Line Arguments:

Pass build variables as properties

[Advanced...](#)

[Add build step](#)



# Describing builds – build files (I)

- Predefined structure/tasks (e.g.: Travis CI, AppVeyor).
- Committed to source repository.
- Specific to the build service.
- Additional customizations
  - Build environment (base-box, hosts, variables, etc).
  - Build matrix (e.g. platform x configuration).

```
1  branches:
2    only:
3      - master
4
5    image: Visual Studio 2015
6  environment:
7    my_var1: value1
8
9    configuration: Release
10 build:
11   project: MyApp.sln
12 test:
13   assemblies:
14     - MyApp.dll
15
16 deploy:
17   - provider: NuGet
18     artifact: /*\*.nupkg/
19
20 notifications:
21   - provider: Email
22     to:
23       - luisgoncalves@boldint.com
24     on_build_status_changed: true
```

# Describing builds – build files (II)

- Full language with predefined helpers (e.g.: Rake, Gulp).
- Committed to source repository.
- Specific to the tool; depends on a framework (e.g.: nodejs).
- Less control of the build environment.

```
1  var gulp = require('gulp');
2  var eslint = require('gulp-eslint');
3  var flatten = require('gulp-flatten');
4  var uglify = require('gulp-uglify');
5  var concat = require('gulp-concat');
6
7  var appScriptsLined = function () {
8    return gulp
9      .src(['app/scripts/**/*.js'])
10     .pipe(eslint())
11     .pipe(eslint.failAfterError());
12  };
13
14  gulp.task('dist', function () {
15    return appScriptsLined()
16      .pipe(flatten())
17      .pipe(concat('bundle.js'))
18      .pipe(uglify())
19      .pipe(gulp.dest('dist/js'));
20  });
21
22  gulp.task('default', ['dist']);
```

# Cake (C# Make)

*“Cake is a cross platform build automation system with a **C# DSL** (...) compiling code, copy files/folders, running unit tests, and build NuGet packages.”*



# Cake (C# Make)

- Build described in C#
  - Access to all C# and .NET features
  - Built-in helpers/wrappers for common operations
  - Committed to source control
- Open source, cross-platform
  - .NET, Mono, .NET Core
- Supports most tools on the .NET ecosystem
- Alternatives: PSake (Powershell), Fake (F#), MSBuild (☹)

**DEMO: hello world**

# Recap

- **Targets/tasks** – `Task("name")`
- **Alias** – `Information("X")`
- **Dependencies** – `IsDependentOn("name")`
- **Parameters** – `Argument("name", "default")`
- **CLI / bootstrapper**
- **Compiled using Roslyn**

**DEMO: .NET solution**

# Other features

- **Criteria**

```
Task("DoSomething")  
    .WithCriteria(environment == "Staging")  
    .Does(() => { ... })
```

- **Setup/teardown**

- Run code before/after the first/last task.
- Run code before/after each task.

- **Directives**

```
#load "utilities.cake"  
#reference "bin/myassembly.dll"
```

- **Configuration**

- NuGet feeds.
- Tools/addins installation path.



# Useful alias / addins

- GitVersion
- AssemblyInfo patching
- WebDeploy / IIS
- Octopus deploy
- HockeyApp
- Xamarin
- Chocolatey
- NPM
- Vagrant
- Slack, Gitter
- DocFx
- Build systems (AppVeyor, Team City, TravisCI, etc)

**DEMO: setup on build server**

# Final notes

cake-build / cake

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Issues 107

Pull requests 12

Projects 0

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Pulse

Graphs

Contributors

Commits

Code frequency

Punch card

Network

Members

Use ← and → to navigate



# Final notes

- v0.17.0.
- .NET Foundation project.
- Simple API / principles; familiar language.
- Good implementation; well tested; extensible.
- Increasing popularity (e.g.: NancyFx).
- *Cake Contrib* organization for addins on GitHub.

# References

- <http://cakebuild.net/>
- <https://github.com/cake-build>
- <https://github.com/cake-contrib>
- <https://github.com/luisgoncalves/cake-sample>

# Thanks!

Luís Gonçalves

- [luisfgoncalves.wordpress.com](https://luisfgoncalves.wordpress.com)
- [github.com/luisgoncalves](https://github.com/luisgoncalves)

# Patrocinadores “GOLD”



# Microsoft

Twitter: @PTMicrosoft    <http://www.microsoft.com/portugal>

# Patrocinadores “Silver”



**LA.NET [PT]**

Reflexões sobre C#, .NET e programação em geral



# Patrocinadores “Bronze”



# <http://bit.ly/netponto-aval-65>



\* Para quem não puder preencher durante a reunião,  
iremos enviar um email com o link à tarde