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
.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.
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).

```
branches:
  only:
    - master

image: Visual Studio 2015
environment:
  my_var1: value1

configuration: Release
build:
  project: MyApp.sln
test:
  assemblies:
    - MyApp.dll

deploy:
  - provider: NuGet
    artifact: ./*.nupkg/

notifications:
  - provider: Email
    to:
      - luisgoncalves@boldint.com

  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.

```javascript
var gulp = require('gulp');
var eslint = require('gulp-eslint');
var flatten = require('gulp-flatten');
var uglify = require('gulp-uglify');
var concat = require('gulp-concat');

var appScriptsLinted = function () {
  return gulp
    .src(['app/scripts/**/*.js'])
    .pipe(eslint())
    .pipe(eslint.failAfterError());
};

gulp.task('dist', function () {
  return appScriptsLinted()
    .pipe(flatten())
    .pipe(concat('bundle.js'))
    .pipe(uglify())
    .pipe(gulp.dest('dist/js'));
});
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 (anggan)
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

- 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!

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