

# CRM SATURDAY

03.06.2017

# MADRID

**ADDRESSING THE CHALLENGES OF CRM  
& DIGITAL TRANSFORMATION**





**Presenter:**

**Jonas Rapp**

**Title:**

**Everyday I'm Shuffling**

*An alternate approach to DevOps for Microsoft Dynamics 365*



# Jonas Rapp

```
var jonas = (WhoAmIResponse)service.Execute(new WhoAmIRequest());
```

- MVP, Head of Development
  - Innofactor Sweden
- Software Developer
  - Since 1994
- 100% MS Dynamics CRM/365
  - Since 2009
- XrmToolBox contributor
  - Since 2014
- Speaker
  - CRM Saturday 2017  
London, Madrid, Oslo
  - eXtreme365 2017 Lisbon



- Twitter: [@rappen](https://twitter.com/rappen)
- Email: [jonas.rapp@innofactor.com](mailto:jonas.rapp@innofactor.com)
- Blog: [jonasrapp.innofactor.se](http://jonasrapp.innofactor.se)

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## Audience

```
var audience = (WhoAreYouResponse)service.Execute(new WhoAreYouRequest());
```

- Developer?
- Used Solution Packager?
- Used Package Deployer?
- Automating Builds?
- Automating Deploys?
- Created VSTS Tasks?
- Used xRM CI Framework?
- Know what DevOps is?



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[DevOps: definition]

DevOps is the union of *people*, *process*, and *products* to enable continuous *delivery* of *value* to our end users.

Donovan Brown, Principal DevOps Program Manager at Microsoft

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[DevOps: alternate definition]

Combining *Development, Build, Release* and *Deploy*  
into one common *pipeline* for streamlined *delivery*

Jonas Rapp, some random dude in Sweden

# Why DevOps?

## Quality and Efficiency

- Automation
  - CI/CD or manual
- No humans
  - Short-cuts, forget
- Rebuild
  - Everything always
- Tests
  - Tasks, integration
- Reproducibility
  - Scripted



# Classic procedure for Dynamics 365

## SolutionPackager

- Combine atomic solution components
  - Exported from local dev CRM
  - Extracted from customizations.xml
- Build solution file
  - XML files from any developer
  - Combined to customizations.xml
  - Begging for conflicts
- Packed to artifact
  - Solution file is not exported from CRM
  - Frankenstein's Solution





# Classic procedure for Dynamics 365

## PackageDeployer

- MS OOB tool
  - Suggested deployment method (but came too late...)
- Import solutions
  - Supports stage for upgrade etc.
- Import data
  - Configuration Migration Tool
- Customizable
  - Call assembly methods
  - Start and End page



# Our vision

## Build

- Compile
  - Build C# and TS
  - Generate minified JS
- Update DEV CRM
  - Manual configuration
  - Automatic update
- Export from DEV
  - Solutions
  - Configuration data
- No VS extensions
  - Agnostic, works with any



# Our vision

## Release and Deploy

- Collect artifacts
  - Prereqs and current project
  - Solutions, data and definitions
- Pack artifacts
  - Create deployment package
  - One (1) distributable file
- Deploy: Import to target
  - Solution files
  - Configuration data
  - Detailed control through definitions



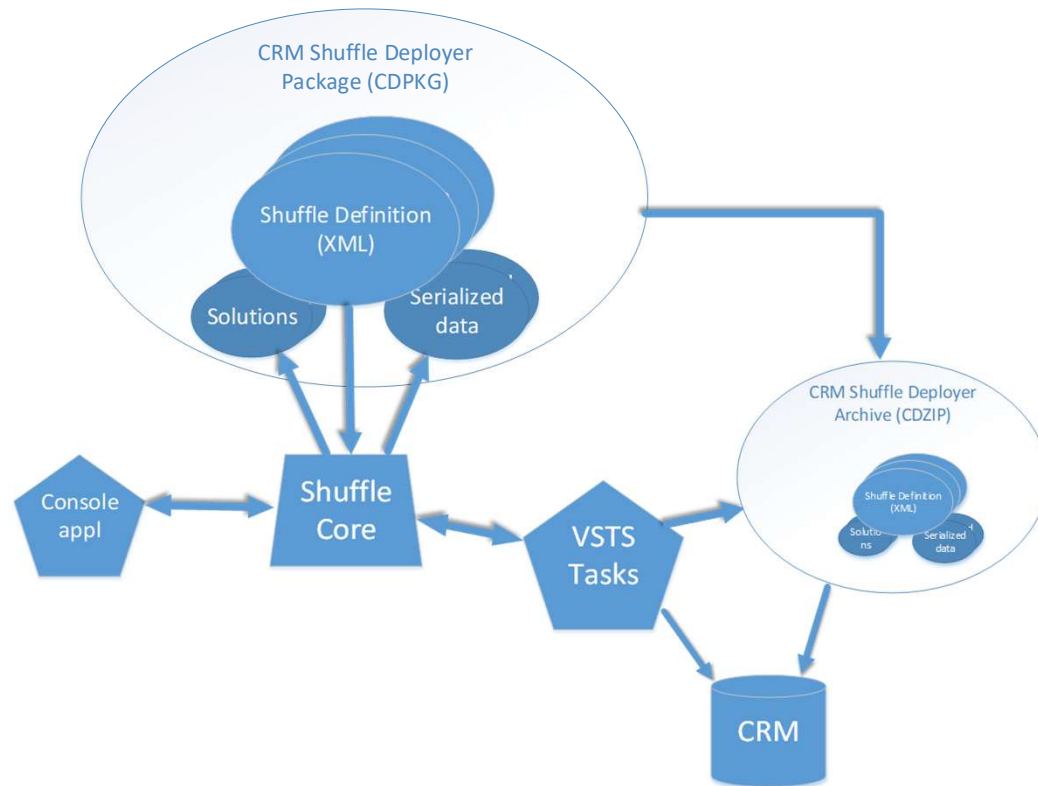
## The Shuffle



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# Shuffle Based export and import



-  Innofactor DevOps: Apply Build Version to assemblies  
This task will extract the four part version number from the generated build number or given file and update all AssemblyInfo.cs files in the solution with this version.
-  Innofactor DevOps: Minify JavaScripts  
Finds all files matching pattern `**\*.maxi.js` and minifies them to corresponding `**\*.js`
-  Innofactor DevOps: Shuffle Export  
Export data and solutions using Innofactor Shuffle.
-  Innofactor DevOps: Shuffle Import  
Import data and solutions using Innofactor Shuffle.
-  Innofactor DevOps: Update Assembly  
Updates an assembly in target CRM organization.
-  Innofactor DevOps: Update Web Resources  
Update web resources from local folder structure to target CRM organization.

<http://marketplace.visualstudio.com> "CRM"

<https://github.com/Innofactor/Innofactor.Crm.CI/>



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# DEMO

- Shuffle Definition
- Shuffle Data
- XrmToolBox tools
- CRM Shuffle Deployer
- VSTS Build tools
- Running a complete build – release – deploy circle...
  
- Bye bye PowerPoint, Welcome Real World!  
...and gremlins...



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