



Dynamic test environments for fun and profit

or how we got 12 times faster with Docker

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Agenda

- Software development @ ICTU
- Challenges
- Solution
- Docker
- Current situation
- Demo
- Questions

Software development @ ICTU

- ICTU
 - Digid
 - Landelijk Register Kinderopvang
 - Modernisering GBA
 - Registratie Niet-Ingezetenen
 - ...
- ISD: department of ~60 people
- Agile development in teams of ~6 people
- Strong focus on quality and automation
- Continuous delivery

Challenges

- Unavailability of test environment(s) due to technical problems
- Failing tests due to environment problems
- Setting up environment for old application version is time consuming and error prone
- Sharing an environment leads to test interference
- Long running automated regression tests (ART)
 - Running ART in parallel leads to test interference
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Solution

- Automate application installation / configuration
- Creating environments on the fly “from scratch”
- Based on simple scripts / configuration
- Reliable reproduction of environments
- Easy rollback
- Enough environments to prevent interference of any kind

Docker

- Standard packages, that can run anywhere
- Lightweight, super fast and cheap
- Maintain as code – revision control, reuse, etc.
- Organization wide repository of images (packages)
- Very programmable
 - Easy to create
 - Easy to start, move, stop or destroy

Current situation

- No more “static” environments
- Environments only exist when they are needed
- Docker templates are created as part of the continuous delivery proces
- Testers can create their own environment with a click of the button
- Automated Regression Test spawns 10 separate environments and 10 Selenium servers to enable test parallelism without test interference. **ART time reduced from 6 hours to 30 minutes**
- Trivial to test against older versions of the application

Demo

Questions?

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