

ACW Dev Ops

**Development infrastructure and
deployment of ACW based projects**

Anti Asko

Agenda

- **Development**

Development environment, used tools and integration with Dev OPs

- **Continuous Integration**

Integration server, building and testing of the whole stack

- **Deployment**

Current dev and pro deployment strategy, tools, future plans

- **Summary**

Lessons learnt and outlook for future

Development environment 1/2

- **Node.js/npm**

Software industry standard tools for building JavaScript/HTML5 applications.

More details at: <https://nodejs.org> and <https://www.npmjs.com>

- **Webpack**

JavaScript application module bundler

See <https://webpack.github.io>

- **Sinopia**

- Private npm repository hosted at <http://npm.cern.ch>
- Mirror of public npm repositories
- Provides a possibility of overriding public packages
- Allows Publication of our components and libraries
- *Sinopia is not actively developed anymore*

credits for Sinopia setup to E. Fejes (APs) for help

CBNG

Build and release tool based on Gradle provided by CO Dev Ops team.

Advantages

- Good integration with BE-CO infrastructure
- Aimed at pure Java server-side applications

Disadvantages (to be overcome)

- Not enough support for web development
- Lack of integration with NodeJS
- ... and aimed at pure Java server-side applications

Continuous Integration

- **Jenkins CI**

Setup as a proof-of-concept and hopefully will become a pro-grade solution (or replaced but another comparable CI server).

- **Full Stack Testing**

- Protractor runs our End-to-End tests
- Screenshots stored in case of failure
- Junit and MockMVC for the back-end

- **Tests are executed after every SVN commit**

- **Notifications in case of failures**

Deployment

▪ CBNG

- Only dev releases so far, not yet possible to release as pro (remote release require node.js on a release server)
- Hopefully proper pro releases will come in future version

▪ HAProxy

- Load balancer between multiple nodes
- Live statistics and health check of the nodes

See <http://www.haproxy.org>

▪ Jenkins CI

- validated feasibility of deployments (not in use currently)
- (in future) Continuous Deployment of dev releases
- (in future) manual pro deployment via Jenkins jobs

Summary

- Development is smooth and fast
- Full stack testing is working as expected
- Possibility of dev releases and deployments
- Node.js needs to become part of infrastructure stack
- We are looking for Sinopia replacement (e.g. Verdaccio)
- Investigating possibilities of better integration of current build tools (CBNG) with web stack and pro deployments

We reached a point where
our development environment has to be solidified
with respect to provided tools and overall infrastructure
and become part of a standard infrastructure provided
by our sys admins/devops.