

Pasoe Devops

You will find adventure, or adventure will find you

Introduction

- Julian Lyndon-Smith
 - Chief Enterprise Architect, Build.One
 - Using progress since v3 .. maybe v4 ..
- Several open source projects
 - Stomp : messaging for ActiveMQ
 - Loki : generate openedge classes from OpenApi spec
 - Maia: generate openedge classes for database access
 - UIB utilities
 - v8Stuff.com and v9Stuff.com

What is DevOps ?

A portmanteau of “development” and
“operations”

What is Portmanteau ?

- A large travelling bag, typically made of stiff leather and opening into two equal parts.
- A word blending the sounds and combining the meanings of two others, for example motel or brunch. Or DevOps

What is DevOps ?

- Develop and test in an environment similar to production
- Deploy builds frequently
- Deploy builds on-demand
- Validate quality continuously

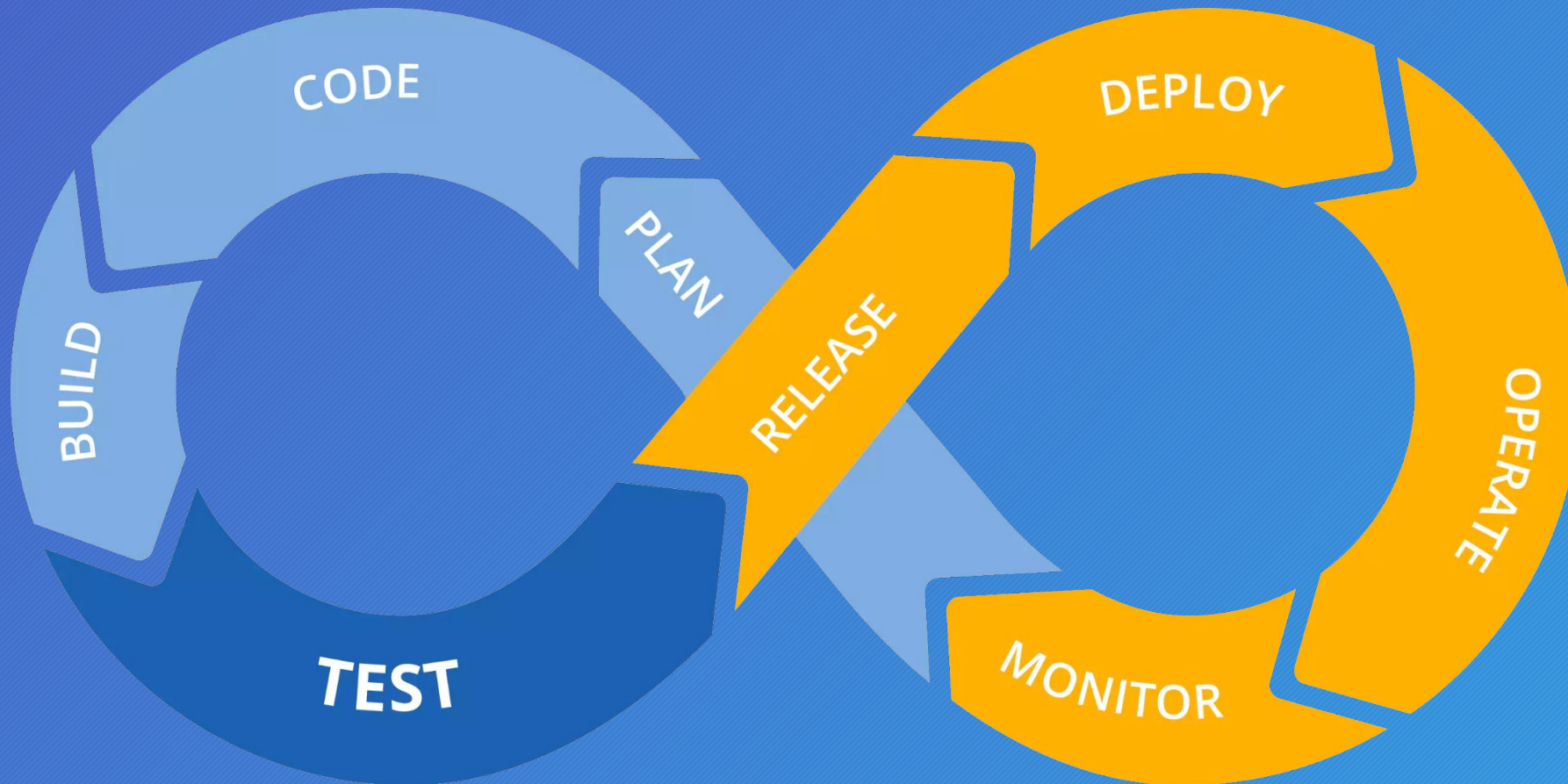
Drivers for DevOps Adoption

- Agile and other development processes
- Increased demand for reliable, predictable releases
- Availability of cloud / on premise infrastructure
- Wider selection of automated tools and configuration

Benefits of DevOps

- Speed
- Rapid delivery
- Reliability
- Improved collaboration
- Security

DevOps Cycle



Get ready for DevOps

- Cloud / on-premise / hybrid
- Version control
- Asset management
- Application building
- Automation and CI/CD tools
- Development methodologies
- Ticket / project management

Where ?

- Cloud
- On premise
- Hybrid

Where did we go ?



Version control

- Do not use PILS
- Do not use the sneakerNet
- Do not use CNP
- Distributed vs Centralized
 - Not getting into a war
 - <https://www.geeksforgeeks.org/centralized-vs-distributed-version-control-which-one-should-we-choose/>

What did we choose ?



Asset management

- Often overlooked
- Do not use version control for large files
- Store build images
- Store packages
- Source of truth

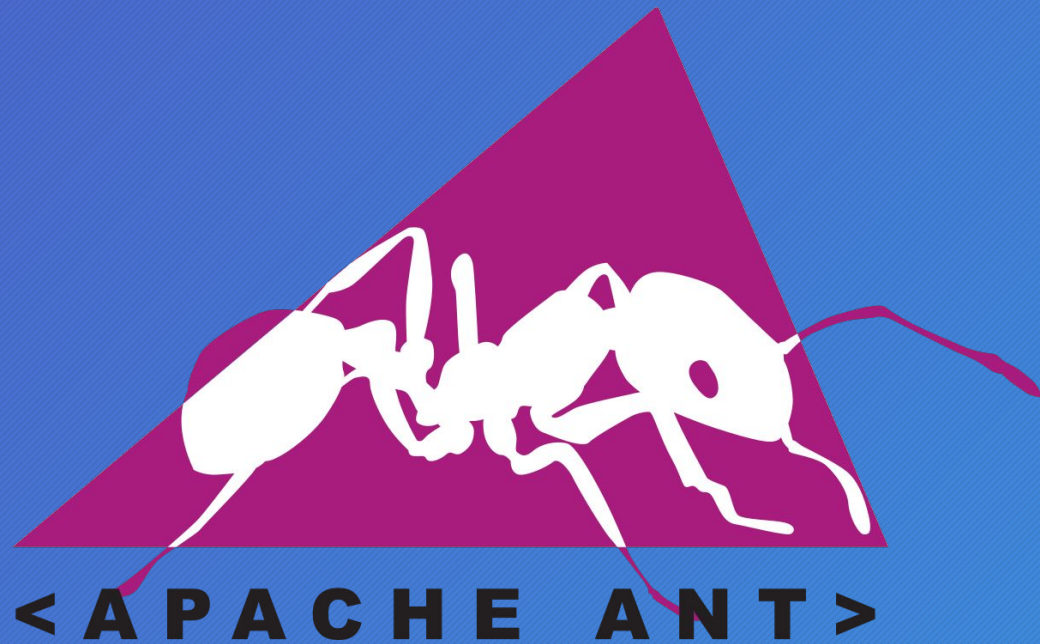
What did we choose ?



Application building

- “John’s PC has the compile tools” 😱
- Must be automated
- Compile all code
- Handle database
- Build procedure libraries
- Home grown vs package

What did we choose ?



Riverside-Software/ **pct**



Build automation for OpenEdge ABL

17

Contributors

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Used by

8

Discussions

93

Stars

62

Forks



Automation & CI/CD

- When / how/ what to build
- When / how/ what to test
- When / how/ what to publish
- Notifications
- Pipelines

What did we choose ?



Development Methodologies

- Waterfall
- Agile
- Rapid Application Development
- Dynamic Systems Model
- Feature Driven Development
- Scrum
- Lean Development

What did we choose ?



Ticket / Project management

- Data readily available to Stakeholders
- Problem management
- Knowledge Management
- Linking tickets to sprints
- Workload management

What did we choose ?



Implementing Devops

- Ticket for everything
- Branch for each ticket
- Commit often
- Push often
- Local tests
- Branch builds
- Branch tests

Docker

- Major driver of DevOps
- Consistent images
 - Openedge, Pasoe
- Simple image installation
- Supported by many tools and processes
- Spin up for building, compiling, testing
- Simple distribution

Cloud based build tools

- Github actions
- Bitbucket
- Gitlab DevOps
- Integrations with CI/CD tools

Deployment

- To which platform ?
- Test / qa / acceptance / staging / prod
- How ?
- Upgrading
- Multi-tenant vs multi-instance

Deployment

- Kubernetes
- Docker Swarm
- Docker
- MicroVm
- Nomad
- Custom

Deployment

The screenshot shows the BuildOne deployment interface. The left sidebar contains navigation options: Projects, Tasks, Deploy, Deploy-Targets, Deployed Applications, and Admin. The main area is divided into several sections:

- Available Workspaces:** Shows a workspace named 'build.one' with a 'build-one' icon.
- Repositories of selected Workspace:** Lists repositories like 'Train', 'max-staging', 'mytraining', and 'estrainingdevelop'.
- Branches in selected Repository:** Shows a list of branches, with 'CT-Mike' selected. Below it, the branch path 'feature/mike-test-portal' is visible.

At the top, there are buttons for 'GIT Login', 'Daten neu laden', 'Push Changes', 'Show Conflicts', and 'Commit Changes'. At the bottom, there are buttons for 'Launch Low-Code Workspace', 'Launch Pro-Code Workspace', 'Version', 'Deploy Standalone', and 'Trigger pipeline'.

The screenshot shows the BuildOne deployment interface with the 'Deploy-Targets' section selected. It displays a table of deployment targets and a list of applications.

List of Deploy-Targets

ID	Name	Type	URL	Agent Version
2	b1-prod	1	unix:///var/run/docker	
36	b1-poc	4	https://portainer.bu.2.171	
48	b1-demo	4	https://portainer.b.2.171	
52	iscorp-staging	2	tcp://100.113.113.13: 2.171	
53	festo-prod	2	tcp://100.114.41.144 2.171	

Details of Deploy-Target

Name: b1-demo
Type: 4
URL: https://portainer.buildone.cloud
Agent Version: ...

Applications

Update

Applications in selected Deploy-Target

ID	Status	Name	Created by	Type	Admins only	Updated by
376	2	datadog-agent	christoph.nissle@build.2		true	christoph.nissle@build.2
377	1	secureable	christoph.nissle@build.or.2		true	julian.lyndonsmith@build
389	1	helpcenter	christoph.nissle@build.or.2		true	julian.lyndonsmith@build
432	1	docsgen-standalone-sta	christoph.nissle@build.or.2		true	andrei.popa_wayfare.ro#
525	1	secureable-dev	julian.lyndonsmith@build.2		true	julian.lyndonsmith@build
530	1	optiwork-test	max.kienle@build.one.2		false	alexander.scharping@bu
588	1	optiwork-security-hub	david.lyndonsmith@build.2		true	david.lyndonsmith@build
592	1	swat-test	andrei.popa_wayfare.ro#	2	false	andrei.popa_wayfare.ro#
594	1	swat-develop	andrei.popa_wayfare.ro#	2	true	andrei.popa_wayfare.ro#
596	1	optiwork-domus	andrei.popa_wayfare.ro#	2	true	andrei.popa_wayfare.ro#
612	1	testbed	david.lyndonsmith@build.2		true	
620	1	portal-test	andrei.popa_wayfare.ro#	2	true	andrei.popa_wayfare.ro#
674	1	jio-poc	andrei.popa_wayfare.ro#	2	true	
683	1	igus-purple	andrei.popa_wayfare.ro#	2	true	andrei.popa_wayfare.ro#
698	1	db-update-test	max.kienle@build.one.2		false	max.kienle@b
702	1	dryrun-test	max.kienle@build.one.2		false	
707	1	sechub-test	julian.lyndonsmith@build.2		true	julian.lyndonsmith@build

A final piece of advice : Choose wisely !

- An average DevOps engineer in the United States costs in the range of \$180K to \$250K a year

PASOE Deployment tips

- Progress.cfg
- Clean pasoe
- Env substitution

The obligatory My Little Pony



Questions