Directions for Pipeline

Jesse Glick

Jenkins World

2016

#JenkinsWorld

Directions for Pipeline

Jesse Glick
CloudBees, Inc.
@tyvole

#JenkinsWorld

© 2016 CloudBees, Inc. All Rights Reserved

Pipeline: The Year in Review

#JenkinsWorld

© 2016 CloudBees, Inc. All Rights Reserved

The big stuff

- Jenkins ~~Workflow~~ Pipeline
- Out of the box in Jenkins 2
  - 2.x version scheme for central plugins
  - pride of place on https://jenkins.io/doc/
- Stage View open source, and Blue Ocean in beta
- Declarative Pipeline in beta
- I have no slide explaining what “Pipeline” is

Compatibility

- most SCMs now work
- many build steps, post-build actions, build environments, triggers
- most work being driven by plugin maintainers
- bigger features relying on Pipeline:
  - external workspace manager
  - Nexus & Artifactory
  - Kubernetes
  - Perforce

Robustness, diagnosis, & control

- Replay
- Pause
- hard kill
- thread dumps
- resumption progress
- abort inside Groovy

Syntax

- symbols in place of `$class`:
  - ~~`step([$class: 'JUnitResultArchiver', testResults: '*.xml'])`~~
  - `step junit('*.xml')`
- `step/wrap` inlining:
  - ~~`step junit('*.xml')`~~
  - `junit '*.xml'`
- Pipeline Model Definition
  - `pipeline {agent docker: 'maven:3.3.9'; stages {stage('Build') {sh 'mvn verify'}}; postBuild {always {junit 'target/surefire-reports/TEST-*.xml'}}}`

UI & docs

- coloration, code completion, snippets, examples in browser
- external syntax page
- static reference (work in progress)

Pipeline-as-Code

- `properties` step for triggers, concurrent build, automatic building
- control over GitHub pull request build behavior
- load `Jenkinsfile` only from trusted PRs; `readTrusted`

Docker support

- compatible with bind-mounts (containerized Jenkins)

Shared libraries

- external libraries
- `@Grab` from global libraries

Script features

- block-scoped `stage`s
- `lock`, `milestone`
- `returnStdout` & `returnStatus` options for `sh` & `bat`
- `currentBuild.changeSets`

CloudBees Jenkins Platform extensions

- custom multibranch Pipeline project factories
- template transformer for definition from SCM
- template attribute control for a textarea using Pipeline syntax

Demo time!

#JenkinsWorld

© 2016 CloudBees, Inc. All Rights Reserved

We know you need it…

Jenkins World
2016

#JenkinsWorld

© 2016 CloudBees, Inc. All Rights Reserved

Better Groovy coverage

- `for (x in list) {…}` works for some cases
- `list.each {…}` still does not work, but at least better reported

Visualization

- display of nested stages
- matrix-y projects

More…

- test framework
- more flexible multibranch
- and nine epics more

Jenkins World

2016

#JenkinsWorld