Directions for Pipeline

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Pipeline: The Year in Review
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/](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
• 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 stages
- 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!
We know you need it...
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