Jenkins Configuration Details

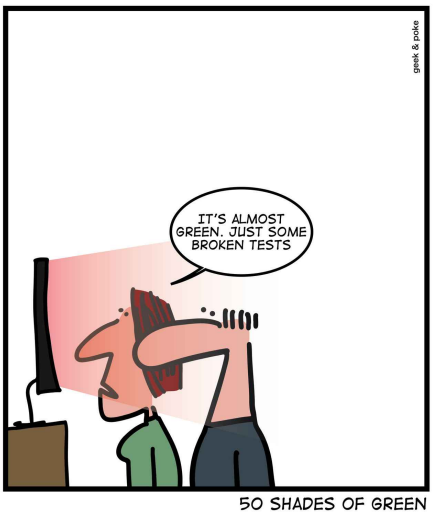
Version 1.18-SNAPSHOT

2018-12-11

Table of Contents

Table 1. History

Date	Author	Detail
2018-09-19	bcouetil	- Sample asciidoctor maven project published on Github - Github & LinkedIn links - Sample project tree - new images + resizing and positioning
2018-08-29	bcouetil	Asciidoc HTML look & feel changes
2018-08-23	bcouetil	Initial commit



1. Server configuration

Connect to Jenkins homepage.

1.1. Plugins installation

This has to be done only for a new Production Line

- Go to **Jenkins** → **Administration Jenkins** → **Gestion des plugins**
- Update all plugins which have an update available
- Select **Disponibles** (=available) and install :
  - Pipeline Maven Integration
  - Throttle Concurrent Builds Plug-in
    - To be able to force non concurrent builds
  - Xvnc
    - To have a virtual screen if needed in tests
  - Naginator
    - For retry on failure
  - Gerrit Trigger
    - To launch job on gerrit update
  - HTML Publisher plugin
    - To have the **Maven Reporting** link when "maven site" is launched
  - Monitoring
    - To see nice health data of Jenkins on https://bpmfactory.s2-eu.nvx.com/jenkins/monitoring
  - JUnit Attachments
    - for enhanced job reporting
  - Logstash
    - To send jenkins jobs output to logstash then elastic

- diskcheck
  - Check filesystem space on slave before a build
- disk-usage
  - Show disk usage per build, configuration in **Administrer Jenkins** → **[Configurer le système]** → **Utilisation du disque**
- AnsiColor
  - To allow colors in build logs
- Simple Theme Plugin
  - to change Jenkins basic theme

1.2. Change Theme

This has to be done only for a new Production Line

- Have the Simple Theme Plugin installed
- Navigate **Administrer Jenkins** → **[Configurer le système]** → **Theme** section
  - URL of theme CSS = https://cdn.rawgit.com/afonsof/jenkins-material-theme/gh-pages/dist/material-cyan.css
    - see the author's page for other colors : http://afonsof.com/jenkins-material-theme/
  - Save

1.3. Gerrit Trigger Configuration

This has to be done only for a new Production Line

On Jenkins :

- Create the console-master job if not already existing

  Create a new freestyle job.

  Name it console-master

  General

  ☑ **[Restreindre où le projet peut être exécuté]**
  - master

  Put this **Build** → **[Ajouter une étape au build]** → **[Exécuter un script shell]** → paste this and save :

```
ssh-keygen -y -f /root/.ssh/id_rsa > /root/.ssh/id_rsa.pub
ls -lart /root/.ssh/
more /root/.ssh/id_rsa.pub
```

- Add 1 executor on the master node
  - **Home** → **[État du lanceur de compilations]** → **[maître]** → **Configurer**
- Execute the console-master
- Keep track of what the execution gave for later Gerrit configuration, example :

```
ssh-rsa
AAAAB3NzaC1yc2EAAAADAQABAAABAQDKGER5oLwkNhcCYtTzmUQooA+1mdrjIGi84AVsOHyNpsMqFBhkpxfImvopvKlYiztXUA15dwwDsPWq1tUcy/4N
WqKnMTQA57xxxT2r8suF/DVlH6fNn8T73mGz9+kT77FXHuaMfmDTqrwPngUYQMm2Y9kTjGhIcH/jseq6jCUawITAOs/6EUbs7jtJ/S+jMb6Ed60S7S/n
R3IzQwVrXMiQjDdFsL8RWEBQ54T4cNia/HMI8MK7mEEF5K008g4Ru3Bidk+VSisPUYFPmNc/tE12RyAjvkcwWxrYqFEB5h6RlS0yWXAjCUzjv8T0ov4W
us+ZqNgqUMYtBBf+zQvQC1ub
```

- When finished, remove the executor from master node
- Create a local trigger server
  - **Home → Administrer Jenkins → Gerrit Trigger → Add New Server**
    - Gerrit Connection Setting
      - Name = local_server
      - Hostname = gerrit
      - Frontend URL = http://gerrit/
      - SSH Port = 29418
      - Username = svc-fr-bpmfact
      - SSH Keyfile = /root/.ssh/id_rsa
    - Gerrit Reporting Values
      - Verify = <vide>, 1, -1, -1, -1
      - Code Review = <vide>, 1, -1, -1, -1
    - Gerrit Verified Commandes
      - Started = vide
      - Successful =

```
gerrit review <CHANGE>,<PATCHSET> --message 'Build Successful (      ) <BUILDS_STATS>' --verified
<VERIFIED>
```

      - Failed =

```
gerrit review <CHANGE>,<PATCHSET> --message 'Build Failed (  _  ) <BUILDS_STATS>' --verified
<VERIFIED>
```

      - Unstable =

```
gerrit review <CHANGE>,<PATCHSET> --message 'Build Unstable (   °       °)  <BUILDS_STATS>' --verified
<VERIFIED>
```

      - Not Built =

```
gerrit review <CHANGE>,<PATCHSET> --message 'No Builds Executed (      ,)  <BUILDS_STATS>' --verified
<VERIFIED>
```

    - Save

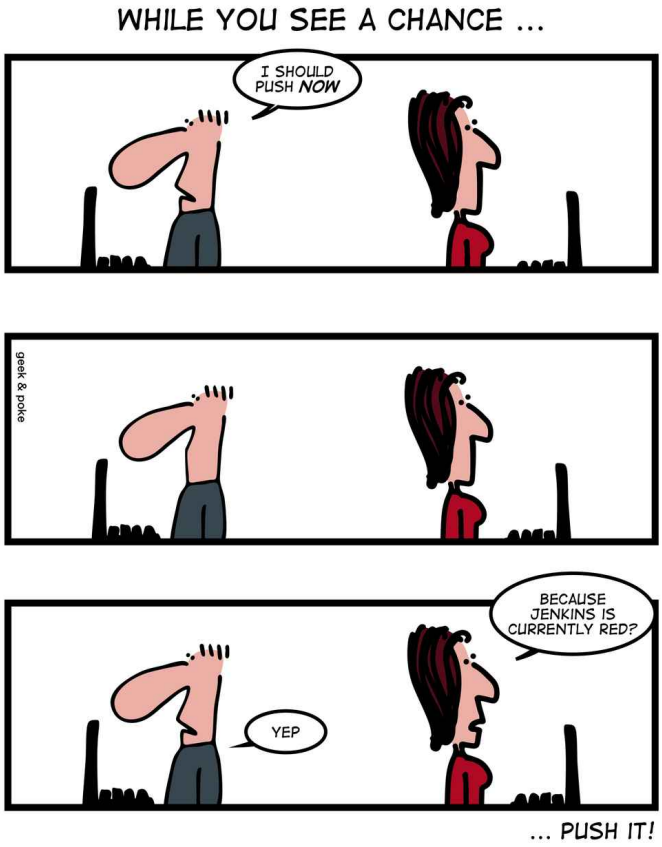
On Gerrit :

- Connect with the technical user (svc-fr-bpmfact / Bpm-fact0ry)

    - You may have to use a secondary browser, since authentication is very persistent on Gerrit
- Click on the user top right → **Settings** → **SSH Public Keys** → **[Add Key...]**
- Add the public key content from Jenkins server (the one asked to be kept track earlier), starting with **ssh-rsa**

On Jenkins :

- Test the earlier configured connection of the trigger with **Test Connection** while editing local_server
- Restart jenkins with : https://bpmfactory.s2-eu.nvx.com/jenkins/safeRestart
- The Gerrit trigger should be up and running



1.4. Administration

This has to be done only for a new Production Line

1.4.1. Overall configuration

Connect to Jenkins configuration page : https://bpmfactory.s2-eu.nvx.com/jenkins/configure

Propriétés globales

- JAVA_HOME = /usr/

Jenkins Location

- Adresse email de l'administrateur système = xxxxx@nvx.com

Extended E-mail Notification

- SMTP server = smtp.nvx.fr

- Default user E-mail suffix = @nvx.com

Notification par email

- Serveur SMTP = smtp.nvx.fr
- Suffixe par défaut des emails des utilisateurs = @nvx.com

Save.

1.4.2. Tools configuration

Connect to Jenkins tools configuration page : https://bpmfactory.s2-eu.nvx.com/jenkins/configureTools/

Maven

- Nom = Maven 3.5
- Version = 3.5.2

Logstash Plugin

- Indexer type = ELASTICSEARCH
- Host name = http://frpardge.corp.nvx.com
- Port = 9200
- Key = /jenkins/builds

Save.

1.5. Allow CSS on published HTML

This has to be done only for a new Production Line

- Create a pipeline "css-support"
- Build Triggers
  - Construire périodiquement
    - Planning = 0 10,15,20 * * *
- Pipeline

```
println(System.getProperty("hudson.model.DirectoryBrowserSupport.CSP"))
System.setProperty("hudson.model.DirectoryBrowserSupport.CSP", "")
println(System.getProperty("hudson.model.DirectoryBrowserSupport.CSP"))
```

  - Uncheck **Use Groovy Sandbox** and save

1.6. SonarQube token

To be able to upload quality results to SonarQube, you have to create a token.

Go to SonarQube application on the PL → **YourName** → **My Account** → **Security** → Name = Jenkins → **Generate**

Now maven can upload results to SonarQube with something like :

```
mvn sonar:sonar -Dsonar.login=ab7451586619e21d0e2bb50389899ce3595e3 -Dsonar.host.url=http://sonarqube:9000/sonarqube
```

1.7. ssh key on remote server

This has to be done only for a new remote server

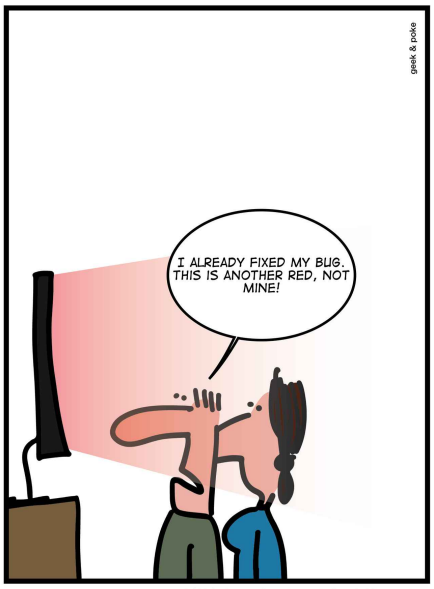
If you have a remote server where you deploy your artifacts for further developments or tests : * note the result of the slavePrep.sh script under **Here is this server's ssh public key**. Here is an example

```
ssh-rsa
AAAAB3NzaC1yc2EAAAADAQABAAABAQDZRLfTsI+cTRjbhYhnDvIOI3lsexMiJpwcBmeuJrISnEdh1LRPlviQjtI1h7NCihejVIPgvzyMVn3tMLsvABBXLTbV
FIetOudpJn+8isnYAWWaaqX2fce/BqjLC26ygR4n25sqTO/GE9AhV5uBPbYTr4HCrH9Wzd8nU13DXm8COhxUKh1+Uwm47KB11fVH/boIUygocIRu1FXS9TJy
MU0qFf3GGmDXs56VTe4ZQtPBHJ1klRXQQc6UIhTbdLpedo4Khvzr7TpdVZg13qXZt35/t7Gu4lbImHSlN64TKhaxAYgCPjYKgl9tAWJpEkk3WzXghohLivIQ
PInu5h3uvckH jenkins@b43496a2520e
```

- Connect on the remote server via SSH
- add the key to **~/.ssh/authorized_keys** file

1.8. Pipelines creations

1.8.1. The Review pipeline



This will be the review pipeline with steps from checkout to quality check. This pipeline is a "pipeline as code".

Go to Jenkins home page :

https://bpmfactory.s2-eu.nvx.com/jenkins

- Click **New Item**
- Choose a name : CG-WM_P1_Review
- Choose Pipeline type

General

- Description = This is the review pipeline fired by Gerrit on non yet validated push
- Check **Supprimer les anciens builds**
  - Strategy = Log Rotation
  - Nombre de builds à conserver = 10

Build Triggers

In the field **Choose a Server**, **Any Server** won't work

- Choose **Gerrit event**

Gerrit Trigger

- Choose a Server = local_server
- Trigger on = Patchset Created
- Gerrit Project
  - Type = Plain
  - Pattern = cg-wm
  - Branches
    - Type = Plain
    - Pattern = master

Advanced Project Options

None.

Pipeline

- Definition = Pipeline script

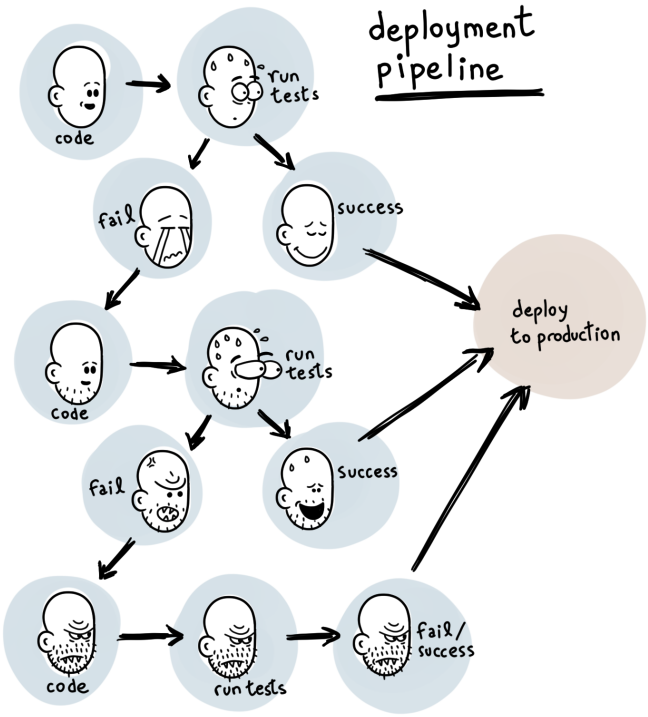
Pipeline content to copy/paste

```
#!groovy

properties([
  buildDiscarder(logRotator(artifactDaysToKeepStr: '', artifactNumToKeepStr: '', daysToKeepStr: '', numToKeepStr: '7')),
  [$class: 'ThrottleJobProperty',
    categories: [],
    limitOneJobWithMatchingParams: false,
    maxConcurrentPerNode: 0,
    maxConcurrentTotal: 0,
    paramsToUseForLimit: '',
    throttleEnabled: false,
    throttleOption: 'project'],
  pipelineTriggers([
    gerrit(customUrl: '',
      gerritProjects: [[branches: [[compareType: 'PLAIN', pattern: 'master']],
      compareType: 'PLAIN', disableStrictForbiddenFileVerification: false, pattern: 'cg-wm']],
      serverName: 'local_server',
      triggerOnEvents: [patchsetCreated(excludeDrafts: false, excludeNoCodeChange: false, excludeTrivialRebase: false)]
    )
  ])
])
```

```
node {
  timeout(30) {
    try {
      stage('Checkout') {
        cleanWs()   // requires workspace cleanup plugin to be installed
        echo "**** Starting checkout of patchset ${GERRIT_PATCHSET_NUMBER} on change number ${GERRIT_CHANGE_NUMBER}"
        git username: 'svc-fr-cric', password: '****', url: 'https://cric.pl.s2-eu.nvx.com/gerrit/cg-wm.git'
        def changeBranch = "change-${GERRIT_CHANGE_NUMBER}-${GERRIT_PATCHSET_NUMBER}"
        sh "git fetch origin ${GERRIT_REFSPEC}:${changeBranch}"
        sh "git checkout ${changeBranch}"

        def v = version(readFile('pom.xml'))
        echo "Building version ${v}"
      }
      stage('Compilation') {
        //slaves are wiped out randomly, so we prepare them on each execution
        sh '$WORKSPACE/src/scripts/slavePrep.sh'

        withMaven(maven: 'Maven 3.5', mavenOpts: '-Xmx1024M', options: [artifactsPublisher(disabled: true)]) {
          //clean to deploy libs to local maven repository
          sh "mvn clean dependency:purge-local-repository"
          //The assembly is postponed : it needs some further generated PDF
          sh "mvn install verify -DskipTests -Dassembly.skipAssembly=true"
        }
      }
      stage('Verification'){
        parallel (
          "Unit Tests" : {
            wrap([$class: 'Xvnc', takeScreenshot: false, useXauthority: true]) {
              withMaven(maven: 'Maven 3.5', mavenOpts: '-Xmx1024M', options: [artifactsPublisher(disabled: true)]) {
                sh "mvn test -s cg-settings.xml -Dcheckstyle.skip=true"
                //Maven auto reports JUnit surefire results
              }
            }
           },
          "Documentation" : {
            sh '$WORKSPACE/src/scripts/asciidocOnlyModified.sh'
            //get history from git to asciidoc documentation
            sh '$WORKSPACE/src/scripts/asciidocHistory.sh $WORKSPACE'
            withMaven(maven: 'Maven 3.5', mavenOpts: '-Xmx1024M', options: [artifactsPublisher(disabled: true)]) {
              //validate produces the date for PDF
              sh "mvn validate asciidoctor:process-asciidoc antrun:run@pdfsAddVersion -s cg-settings.xml
-Dcheckstyle.skip=true"
            }
            archiveArtifacts artifacts: '**/*.pdf', excludes: '**/test*.pdf', allowEmptyArchive: true
          }
        )
      }
      stage('Integration Tests'){
        //integration tests have to be after documentation for the tracker zip to include the user manual
        wrap([$class: 'Xvnc', takeScreenshot: false, useXauthority: true]) {
          withMaven(maven: 'Maven 3.5', mavenOpts: '-Xmx1024M', options: [artifactsPublisher(disabled: true)]) {
            try{
              //we do not install, since these suspicious jars could be misused by other projects
              sh "mvn verify failsafe:verify -Dcg.ut.skip=true -Dcheckstyle.skip=true"
            } finally {
              //Maven does not auto report JUnit failsafe results
              junit '**/target/failsafe-reports/*.xml'
            }
          }
        }
      }
      stage('Quality Gate') {
        withMaven(maven: 'Maven 3.5', mavenOpts: '-Xmx1024M', options: [artifactsPublisher(disabled: true)]) {
          sh "mvn sonar:sonar -Dsonar.login=0d1356516289799b179c6c7f851c9d4464ab04e2
-Dsonar.host.url=http://sonarqube:9000/sonarqube"
        }
        sh '$WORKSPACE/src/scripts/sonarStatus.sh'
      }
```

```
      stage('Assembly') {
        withMaven(maven: 'Maven 3.5', mavenOpts: '-Xmx1024M', options: [artifactsPublisher(disabled: true)]) {
          sh "mvn install -DskipTests -Dcheckstyle.skip=true"
          sh "mvn dependency:purge-local-repository"
        }
        archiveArtifacts artifacts: '**/target/*.zip'
      }
    } catch (any) {
      step([
        $class: 'Mailer', notifyEveryUnstableBuild: true,
        recipients: emailextrecipients([[$class: 'CulpritsRecipientProvider'],
        [$class: 'RequesterRecipientProvider']])
        ])
      currentBuild.result = 'FAILURE'
    }
  }//timeout
  logstashSend failBuild: false, maxLines: 1000
}//node

@NonCPS
def version(text) {
  def matcher = text =~ '<version>(.+)</version>'
  matcher ? matcher[0][1] : null
}
```

1.8.2. The Deploy pipeline



This will be the main pipeline with everything from checkout to deployment. This pipeline is a “pipeline as code”.

Go to Jenkins home page :

https://bpmfactory.s2-eu.nvx.com/jenkins

- Click **New Item**
- Choose a name : CG-WM_P2_Deploy
- Choose **Pipeline** type

General

- Check **Supprimer les anciens builds**
  - Strategy = Log Rotation
  - Nombre de builds à conserver = 10

Build Triggers

- Choose « Scrutation de l'outil de gestion de version »
- Planning = H * * * *

Advanced Project Options

None.

Pipeline

Definition = Pipeline script from SCM

SCM = Git

- Repositories
  - Repository URL = http://bpmfactory.s2-eu.nvx.com/gerrit/p/cg-wm.git
  - Credentials = svc-fr-bpmfact / Bpm-fact0ry
- Branches to build : */master

Script Path = Jenkinsfile-2-deploy-to-dev

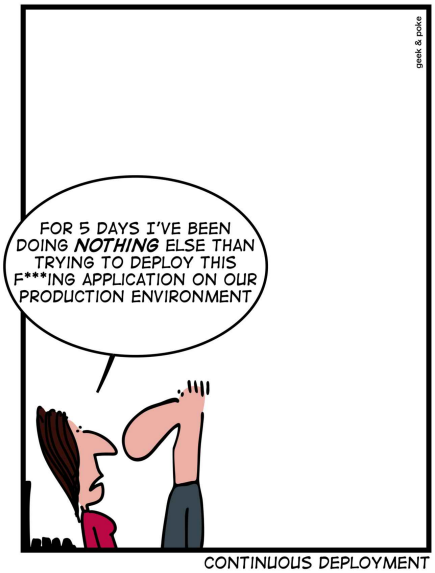
☑ Lightweight checkout

Pipeline content (for information)

```
#!groovy
node {
  timeout(60) {
    try {
      stage('Checkout') {
        cleanWs()   // requires workspace cleanup plugin to be installed
        retry(3) {
          checkout scm
        }
        def v = version(readFile('pom.xml'))
        echo "Building version ${v}"
      }
      stage('Compilation') {
        //slaves are wiped out randomly, so we prepare them on each execution
        sh '$WORKSPACE/src/scripts/slavePrep.sh'
        withMaven(maven: 'Maven 3.5', mavenOpts: '-Xmx1024M', options: [artifactsPublisher(disabled: true)]) {
          //used to deploy libs to local maven repository
          sh "mvn clean"
          //The assembly is postponed : it needs some further generated PDF
          sh "mvn install -DskipTests -Dassembly.skipAssembly=true"
        }
      }
      stage('Unit Tests') {
        wrap([$class: 'Xvnc', takeScreenshot: false, useXauthority: true]) {
          withMaven(maven: 'Maven 3.5', mavenOpts: '-Xmx1024M', options: [artifactsPublisher(disabled: true)]) {
            sh "mvn test -Dcheckstyle.skip=true"
            //Maven auto reports JUnit surefire results
          }
        }
```

```
      }
      stage('Documentation') {
        //get history from git to asciidoc documentation
        sh '$WORKSPACE/src/scripts/asciidocHistory.sh $WORKSPACE'
        withMaven(maven: 'Maven 3.5', mavenOpts: '-Xmx1024M', options: [artifactsPublisher(disabled: true)]) {
          //validate produces the date for PDF
          //javadoc:aggregate is CPU intensive, we don't parallelize for now
          sh "mvn validate asciidoctor:process-asciidoc antrun:run@pdfsAddVersion javadoc:aggregate
-Dcheckstyle.skip=true"
          sh "mvn javadoc:jar -pl cg-utils -Dcheckstyle.skip=true"
        }
        step([$class: 'JavadocArchiver', javadocDir: 'target/site/javadoc', keepAll: true])
        archiveArtifacts artifacts: '**/*.pdf,**/*-javadoc.jar', excludes: '**/test*.pdf'
      }
      stage('Integration Tests') {
        wrap([$class: 'Xvnc', takeScreenshot: false, useXauthority: true]) {
          withMaven(maven: 'Maven 3.5', mavenOpts: '-Xmx1024M', options: [artifactsPublisher(disabled: true)]) {
            try{
              sh "mvn verify failsafe:verify -Dcg.ut.skip=true -Dcheckstyle.skip=true"
            } finally {
              //Maven does not auto report JUnit failsafe results
              junit '**/target/failsafe-reports/*.xml'
            }
          }
        }
      }
      stage('Quality Check') {
        withMaven(maven: 'Maven 3.5', mavenOpts: '-Xmx1024M', options: [artifactsPublisher(disabled: true)]) {
          sh "mvn sonar:sonar -Dsonar.login=0d1356516289799b179c6c7f851c9d4464ab04e2
-Dsonar.host.url=http://sonarqube:9000/sonarqube"
        }
        sh '$WORKSPACE/src/scripts/sonarStatus.sh'
      }
      stage('Assembly') {
        withMaven(maven: 'Maven 3.5', mavenOpts: '-Xmx1024M', options: [artifactsPublisher(disabled: false)]) {
          sh "mvn install -DskipTests -Dcheckstyle.skip=true"
        }
        //archiveArtifacts is now in "Deployment" phase since we download packages
      }
      stage('Publication'){
        parallel (
          "Deployment to Nexus and IS": {
            withMaven(maven: 'Maven 3.5', mavenOpts: '-Xmx1024M', options: [artifactsPublisher(disabled: true)]) {
              //sh 'mvn wagon:update-maven-3'
              sh 'mvn deploy -DskipTests -Dassembly.skipAssembly=true -Dcheckstyle.skip=true -s cg-settings.xml'
            }
            sh "ssh devops@frpardge.corp.nvx.com 'cd /opt/sagis/profiles/IS_default/bin;./restart.sh'"
            sh '$WORKSPACE/src/scripts/deployJavadoc.sh'
            sh '$WORKSPACE/src/scripts/getPackages.sh'

            //SchemaSpy must not fail the deployment so we put it after deployment
            sh '$WORKSPACE/src/scripts/schemaspy.sh'
            publishHTML([
              allowMissing     : false,
              alwaysLinkToLastBuild: false,
              keepAll        : true,
              reportDir      : 'target/schemaspy',
              reportFiles      : 'index.html',
              reportName       : 'DB Schema'])

            archiveArtifacts artifacts: '**/target/*.zip'
          },
          "Reporting" : {

            //Git Inspector
            sh 'mkdir target/gitinspector'
            sh 'export PYTHONIOENCODING=utf-8 ; gitinspector --format=html -rTw > target/gitinspector/index.html'
            publishHTML([
              allowMissing     : false,
              alwaysLinkToLastBuild: false,
```

```
              keepAll        : true,
              reportDir      : 'target/gitinspector',
              reportFiles      : 'index.html',
              reportName       : 'Git Inspector'])

            //Maven Site
            withMaven(maven: 'Maven 3.5', mavenOpts: '-Xmx1024M', options: [artifactsPublisher(disabled: true)]) {
              sh 'mvn site site:stage -DskipTests -Dcheckstyle.skip=true -s cg-settings.xml'
            }
            publishHTML([
              allowMissing     : false,
              alwaysLinkToLastBuild: false,
              keepAll        : true,
              reportDir      : 'target/staging',
              reportFiles      : 'index.html',
              reportName       : 'Maven Reporting'])
          }
        )
      }
    } catch (any) {
      step([
        $class: 'Mailer', notifyEveryUnstableBuild: true,
        recipients: emailextrecipients([[$class: 'CulpritsRecipientProvider'],
        [$class: 'RequesterRecipientProvider']])
        ])
      currentBuild.result = 'FAILURE'
    }
  }//timeout
  logstashSend failBuild: false, maxLines: 1000
}//node

@NonCPS
def version(text) {
  def matcher = text =~ '<version>(.+)</version>'
  matcher ? matcher[0][1] : null
}
```



1.8.3. The Release pipeline

This is the release pipeline launched manually at will when an external release is needed. This pipeline is a "pipeline as code".

Go to Jenkins home page :

https://bpmfactory.s2-eu.nvx.com/jenkins

- Click **New Item**
- Choose a name : CG-WM_P3_Release
- Choose **Pipeline** type

General

- Check **Ce build a des paramètres**
  - Paramètre texte
    - RELEASE_VERSION
    - the release version, with pattern 1.YY.MM[.increment] (ex : 1.17.5.9)
- Check **Supprimer les anciens builds**
  - Strategy = Log Rotation
  - Nombre de builds à conserver = 10

Build Triggers

No trigger (manual launch).

Advanced Project Options

None.

Pipeline

Definition = Pipeline script from SCM

SCM = Git

- Repositories
  - Repository URL = http://bpmfactory.s2-eu.nvx.com/gerrit/p/cg-wm.git
  - Credentials = svc-fr-bpmfact / Bpm-fact0ry
- Branches to build : */master

Script Path = Jenkinsfile-4-release

☑ Lightweight checkout

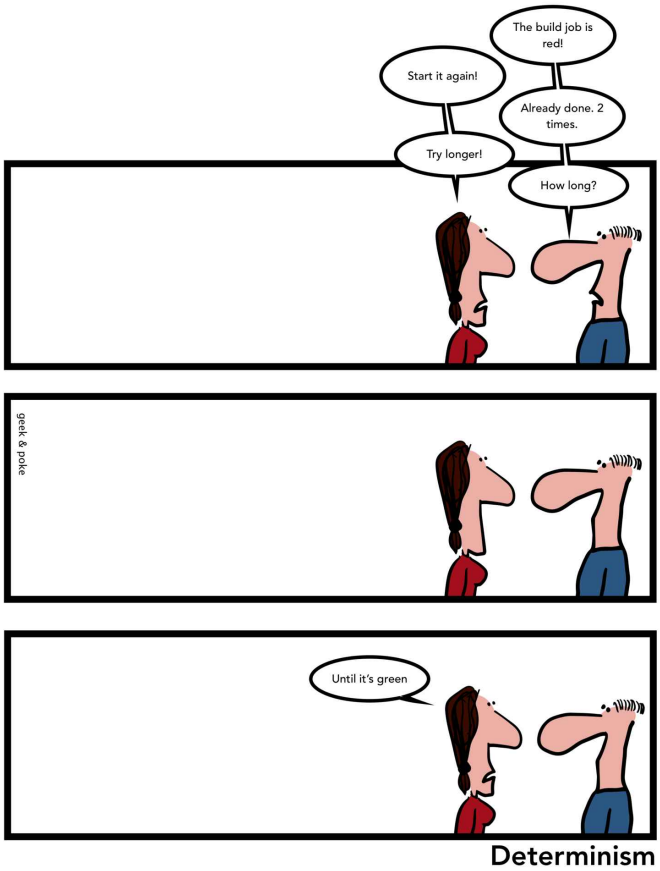
Pipeline content (for information)

```
#!groovy

//Release is a manual firing (and should always be)
//No need to do the whole process, trunk is always trustworthy with our setup
//Just check that the merge pipeline (DeployToDev) is successful

node {
  timeout(30) {
    try {
      stage('Checkout') {
        cleanWs()   // requires workspace cleanup plugin to be installed
        retry(3) {
          checkout scm
        }
        echo "Releasing version $RELEASE_VERSION"
      }
      stage('Documentation') {
```

```
        //get history from git to asciidoc documentation
        sh '$WORKSPACE/src/scripts/asciidocHistory.sh $WORKSPACE'

        withMaven(maven: 'Maven 3.5', mavenOpts: '-Xmx1024M', options: [artifactsPublisher(disabled: true)]) {
          //to put jars in local maven repository if needed
          sh "mvn clean"
          sh "mvn versions:set -DnewVersion=$RELEASE_VERSION"
          //without this local installation, modules are searched on internet on mvn validate
          sh "mvn install -DskipTests -Dassembly.skipAssembly=true"
          //we launch some (quick) tests that contains the generation of service list for the cg-utils doc
          sh "mvn test -pl cg-utils"
          //time to launch the actual doc generation
          //validate produces the date for PDF
          sh "mvn validate asciidoctor:process-asciidoc antrun:run@pdfsAddVersion javadoc:aggregate
-Dcheckstyle.skip=true"
          sh "mvn javadoc:jar -pl cg-utils -Dcheckstyle.skip=true"
        }

        step([$class: 'JavadocArchiver', javadocDir: 'target/site/javadoc', keepAll: true])
        archiveArtifacts artifacts: '**/*.pdf,**/*-javadoc.jar', excludes: '**/test*.pdf'
      }
      stage('Deployment') {
        //Deployment is after documentation because a pdf must be in the zip

        //Delete tag if this is a replayed-on-error build...

        //...locally
        sh "git tag -d cg-wm-$RELEASE_VERSION || true"

        //...remotely
        //Special characters have to be URL encoded : https://stackoverflow.com/questions/6172719/escape-character-in-
git-proxy-password
        sh "git push --force --delete https://svc-fr-cric:****@cric.pl.s2-eu.nvx.com/gerrit/p/cg-wm.git cg-wm-
$RELEASE_VERSION || true"

        withMaven(maven: 'Maven 3.5', mavenOpts: '-Xmx1024M', options: [artifactsPublisher(disabled: true)]) {
          sh "mvn deploy scm:tag -s cg-settings.xml -DskipTests -Dcheckstyle.skip=true"
        }
        sh "$WORKSPACE/src/scripts/deployJavadoc.sh"
        sh "$WORKSPACE/src/scripts/getPackages.sh"
        archiveArtifacts artifacts: '**/target/*.zip'
      }
      stage('Reporting') {
        withMaven(maven: 'Maven 3.5', mavenOpts: '-Xmx1024M', options: [artifactsPublisher(disabled: true)]) {
          sh "mvn site site:stage -DskipTests -Dcheckstyle.skip=true -s cg-settings.xml"
        }
        publishHTML([
          allowMissing     : false,
          alwaysLinkToLastBuild: false,
          keepAll        : true,
          reportDir      : 'target/staging',
          reportFiles      : 'index.html',
          reportName       : 'Maven Reporting'])
      }
    } catch (any) {
      step([
        $class: 'Mailer', notifyEveryUnstableBuild: true,
        recipients: emailextrecipients([[$class: 'CulpritsRecipientProvider'],
        [$class: 'RequesterRecipientProvider']])
        ])
      currentBuild.result = 'FAILURE'
    }
  }//timeout
  logstashSend failBuild: false, maxLines: 1000
}//node

@NonCPS
def version(text) {
  def matcher = text =~ '<version>(.+)</version>'
  matcher ? matcher[0][1] : null
```

```
}
```

1.9. Troobleshooting



1.9.1. Disk space usage > 90 %

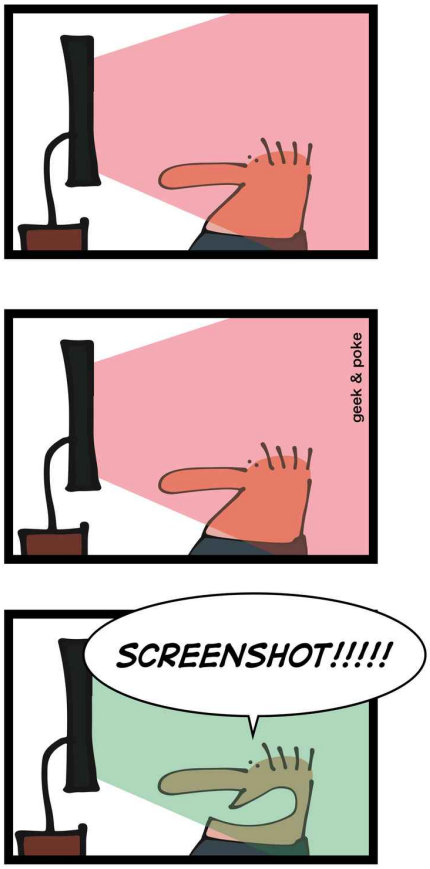
If the disk space usage is too high and your build fails a the start for this reason, you can purge some folders with the below actions.

- Edit the **console** job.
- Put these lines and save :

```
du --max-depth=1 /home/jenkins/workspace/ | sort -n -r | head -n 30
find /home/jenkins/workspace/ -maxdepth 1 -mtime +90 -type d -depth -print
```

- Launch the job
- Following the results, do the necessary deletions
- If there are some ws-cleanup directory, you can delete them safely :

```
rm -rf /home/jenkins/workspace/\*ws-cleanup*/ ???
```



'Ah, stay a while! You are so lovely!'

2. Appendix

2.1. Revision marks

Differences since last tag