Jenkins Configuration Details

Version 1.18-SNAPSHOT

2018-08-22

Table of Contents

Table 1. History

Date	Author	Detail
2018-08-22	NeVraX	HTML Asciidoc to Github

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
${GERRIT_CHANGE_NUMBER}"
                git username: 'svc-fr-cric', password: 'Bocibo15', url: 'https://cric.pl.s2-eu.nvx.com/gerrit/cg-wm.git'
                def changeBranch = "change-${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 Deploy Int pipeline

Describe this pipeline when stable

1.8.4. 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:ptTpilL5FS47RHDFV8541owV4zkbZOtVrxyqRsmGhw@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*/ ???
```

2. Appendix

2.1. Revision marks

Differences since last tag