



zenika  
<animés par la passion>

# Jenkins Configuration Details

Version 1.18-SNAPSHOT

2018-11-22

# Table of Contents

1. Server configuration .....	2
1.1. Plugins installation.....	2
1.2. Change Theme .....	3
1.3. Gerrit Trigger Configuration .....	3
1.4. Administration .....	6
1.4.1. Overall configuration.....	6
1.4.2. Tools configuration.....	6
1.5. Allow CSS on published HTML .....	6
1.6. SonarQube token .....	7
1.7. ssh key on remote server .....	7
1.8. Pipelines creations .....	7
1.8.1. The Review pipeline.....	7
1.8.2. The Deploy pipeline .....	11
1.8.3. The Release pipeline.....	14
1.9. Troobleshooting .....	16
1.9.1. Disk space usage > 90 % .....	17
2. Appendix .....	19
2.1. Revision marks .....	19

*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
AAAAB3NzaC1yc2EAAAADAQABAAQDKGER5oLwkNhcCYtTzmUQooA+1mdrjIGi84AVsOHYNpsMqFBhkpxfImvopvKLYiztXUA15dwwDsPWq1tUcy/4N
WqKnMTQA57xxxT2r8suF/DVlH6fNn8T73mGz9+kT77FXHuaMfmdTqrwPngUYQMm2Y9kTjGhIcH/jseq6jCUawITA0s/6EUbs7jtJ/S+jMb6Ed60S7S/n
R3IzQwVrXMiQjDdFsL8RWEBQ54T4cNia/HMI8MK7mEEF5K008g4Ru3Bdk+VSisPUYFPmNc/tE12RyAjkvcwWxrYqFEB5h6R1S0yWXAjCUzjv8T0ov4W
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 = [xxxxxx@nvx.com](mailto:xxxxxx@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
AAAAB3NzaC1yc2EAAAADAQABAAQDZRLfTsI+cTRjbhYhnDvIOI3LsexMiJpwcBmeuJrISnEdh1LRPlviQjtI1h7NCihejVIPgvzyMVn3tMLsvABBXLtbV
FIetOudpJn+8isnYAWWaaqX2fce/BqjLC26ygR4n25sqTO/GE9AhV5uBPbYTr4HCrH9Wzd8nU13DXm8C0hxUKh1+Uwm47KB11fVH/boIUygocIRu1FXS9TJy
MU0qFf3GGmDXs56VTz4ZQtPBHJ1k1RXQQc6UIhTbdLpedo4Khvzr7TpdVZg13qXZt35/t7Gu41bImHSLN64TKhaxAYgCPjYKg19tAWJpEkk3WzXghohLivIQ
PIInu5h3uvckH 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: emailxrecipients([[ $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: emailxtrerecipients([[ $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([
    $class: 'Mailer', notifyEveryUnstableBuild: true,
    recipients: emailxtextrecipients([$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 %

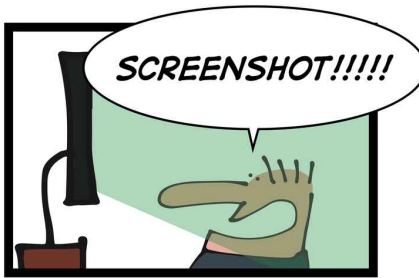
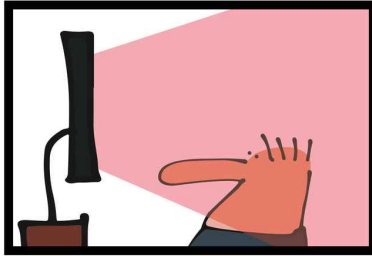
If the disk space usage is too high and your build fails at the start for this reason, you can purge some folders with the below actions.

- 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*

