

# Java EE

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Le framework Spring  
Spring Security



# Définition des dépendances nécessaires

## Repository

- Central 13.7k
- Sonatype 4.7k
- Spring Plugins 3.2k
- Spring Lib M 2.8k
- Alfresco 834
- JCenter 667
- Spring Milestones 510
- Spring Releases 495

## Group

- org.springframework 2.5k
- com.github 1.7k
- org.apache 1.2k
- io.github 271
- org.jboss 234
- org.wso2 177
- org.wildfly 169
- org.codehaus 138

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## 1. Spring Security Core

1,546 usages

[org.springframework.security](#) » [spring-security-core](#)

Apache

spring-security-core

Last Release on Nov 4, 2019



## 2. Spring Security Web

963 usages

[org.springframework.security](#) » [spring-security-web](#)

Apache

spring-security-web

Last Release on Nov 4, 2019



## 3. Spring Security Config

873 usages

[org.springframework.security](#) » [spring-security-config](#)

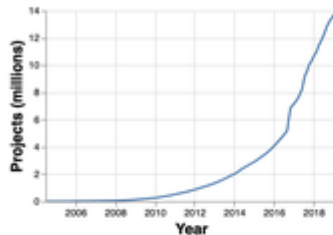
Apache

spring-security-config

Last Release on Nov 4, 2019

Les trois dépendances à rajouter pour la gestion de la sécurité

## Indexed Artifacts (15.7M)



## Popular Categories

- Aspect Oriented
- Actor Frameworks
- Application Metrics
- Build Tools
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- Cache Implementations
- Cloud Computing
- Code Analyzers
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- Configuration Libraries
- Core Utilities

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## Spring Security Core

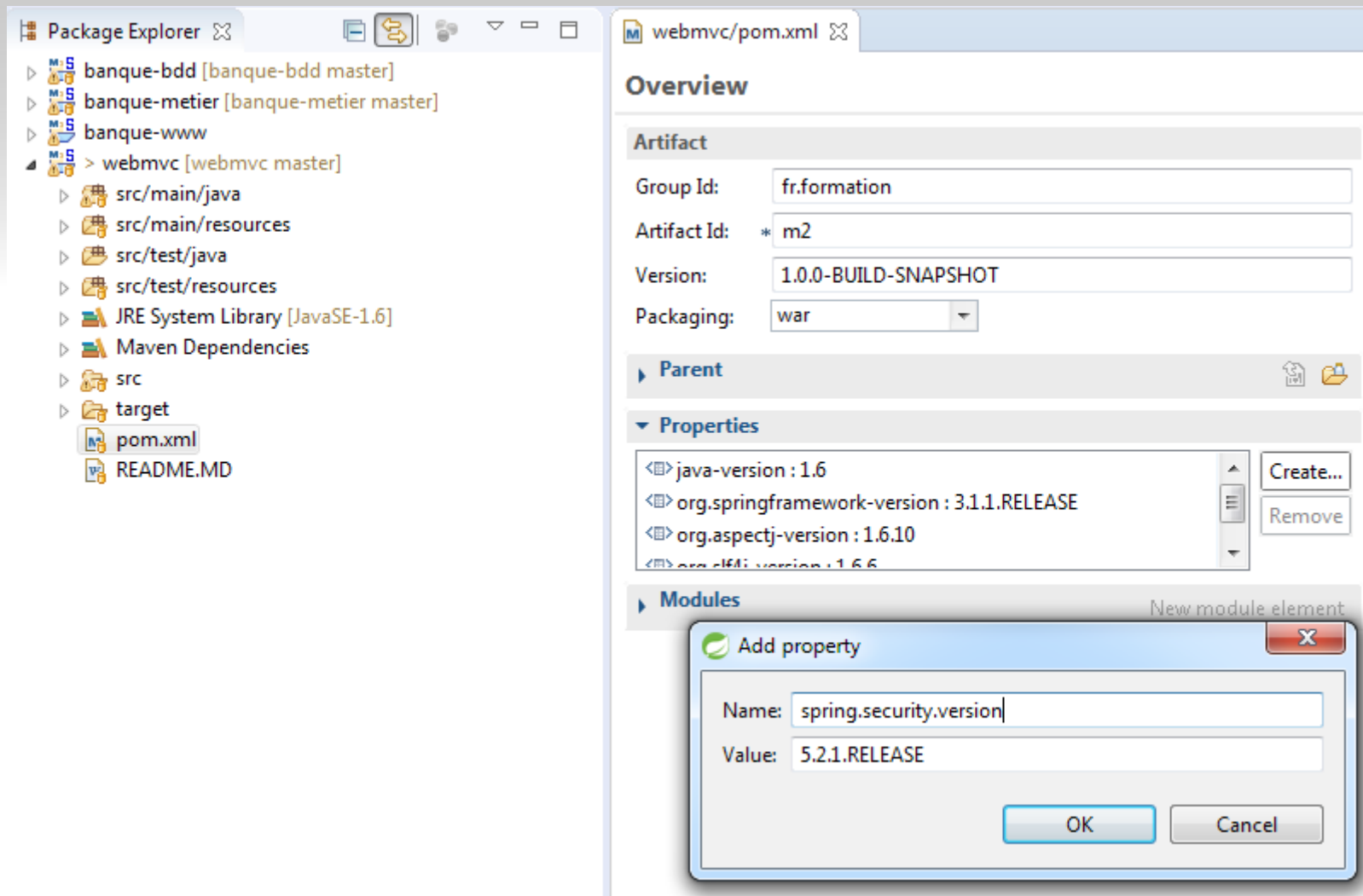
spring-security-core

License	Apache 2.0
Categories	Security Frameworks
Tags	security spring
Used By	1,546 artifacts

Central (86)	Spring Plugins (40)	Spring Lib M (1)	Spring Milestones (3)
JBoss Public (4)	ICM (2)	PavLab (1)	Alfresco (1)

	Version	Repository	Usages	Date
5.2.x	<a href="#">5.2.1.RELEASE</a>	Central	23	Nov, 2019
	<a href="#">5.2.0.RELEASE</a>	Central	383	Sep, 2019
	<a href="#">5.1.7.RELEASE</a>	Central	22	Nov, 2019
	<a href="#">5.1.6.RELEASE</a>	Central	79	Aug, 2019
	<a href="#">5.1.5.RELEASE</a>	Central	129	Apr, 2019
	<a href="#">5.1.4.RELEASE</a>	Central	64	Feb, 2019

Comme elles sont les trois en 5.2.1.RELEASE on va créer une variable pour factoriser cette information dans pom.xml



Onglet Overview dans pom.xml puis create

```

36
37 <!-- https://mvnrepository.com/artifact/org.springframework.security/
38 spring-security-core -->
39 <dependency>
40     <groupId>org.springframework.security</groupId>
41     <artifactId>spring-security-core</artifactId>
42     <version>${spring.security.version}</version>
43 </dependency>
44 <!-- https://mvnrepository.com/artifact/org.springframework.security/
45 spring-security-web -->
46 <dependency>
47     <groupId>org.springframework.security</groupId>
48     <artifactId>spring-security-web</artifactId>
49     <version>${spring.security.version}</version>
50 </dependency>
51 <!-- https://mvnrepository.com/artifact/org.springframework.security/
52 spring-security-config -->
53 <dependency>
54     <groupId>org.springframework.security</groupId>
55     <artifactId>spring-security-config</artifactId>
56     <version>${spring.security.version}</version>
57 </dependency>
58

```

Ajouter chacune des trois nouvelles dépendances en précisant leur version via la variable créée précédemment :  
`${spring.security.version}`

## Dependencies

### Dependencies



- spring-context : \${org.springframework-version}
- spring-webmvc : \${org.springframework-version}
- spring-security-core : \${spring.security.version}
- spring-security-web : \${spring.security.version}
- spring-security-config : \${spring.security.version}
- aspectjrt : \${org.aspectj-version}
- slf4j-api : \${org.slf4j-version}
- jcl-over-slf4j : \${org.slf4j-version} [runtime]
- slf4j-log4j12 : \${org.slf4j-version} [runtime]
- log4j : 1.2.15 [runtime]
- javax.inject : 1
- servlet-api : 2.5 [provided]
- jsp-api : 2.1 [provided]
- jstl : 1.2
- junit : 4.7 [test]

[Add...](#)[Remove](#)[Properties...](#)[Manage...](#)

Le résultat dans l'onglet Dependencies

```

[INFO] -----
[INFO] Building webmvc 1.0.0-BUILD-SNAPSHOT
[INFO] -----
[INFO]
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ m2 ---
[WARNING] Using platform encoding (Cp1252 actually) to copy filtered resources,
[INFO] Copying 1 resource
[INFO]
[INFO] --- maven-compiler-plugin:2.5.1:compile (default-compile) @ m2 ---
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- maven-resources-plugin:2.6:testResources (default-testResources) @ m2
[WARNING] Using platform encoding (Cp1252 actually) to copy filtered resources,
[INFO] Copying 1 resource
[INFO]
[INFO] --- maven-compiler-plugin:2.5.1:testCompile (default-testCompile) @ m2 --
[INFO] Nothing to compile - all classes are up to date
[INFO]
[INFO] --- maven-surefire-plugin:2.12.4:test (default-test) @ m2 ---
[INFO]
[INFO] --- maven-war-plugin:2.2:war (default-war) @ m2 ---
[INFO] Packaging webapp
[INFO] Assembling webapp [m2] in [D:\olivier\eclipse_sts_ws\webmvc\target\m2-1.0
[INFO] Processing war project
[INFO] Copying webapp resources [D:\olivier\eclipse_sts_ws\webmvc\src\main\webap
[INFO] Webapp assembled in [3200 msecs]
[INFO] Building war: D:\olivier\eclipse_sts_ws\webmvc\target\m2-1.0.0-BUILD-SNAP
[INFO] WEB-INF\web.xml already added, skipping
[INFO]
[INFO] --- maven-install-plugin:2.4:install (default-install) @ m2 ---
[INFO] Installing D:\olivier\eclipse_sts_ws\webmvc\target\m2-1.0.0-BUILD-SNAPSHO
[INFO] Installing D:\olivier\eclipse_sts_ws\webmvc\pom.xml to C:\Users\olivier\
[INFO] -----
[INFO] BUILD SUCCESS

```

Run as Maven Install pour vérifier les dépendances



# Installation du filtre de sécurité

```
*web.x...  X root-context...  X security-co...  X servlet-con...  X mvc-dispatc...
1 <!-- XML VERSION= 1.0 ENCODING= UTF-8 -->
2 <web-app version="2.5" xmlns="http://java.sun.com/xml/ns/javaee"
3     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4     xsi:schemaLocation="http://java.sun.com/xml/ns/javaee http://java.sun.co
5
6     <filter>
7         <filter-name>springSecurityFilterChain</filter-name>
8         <filter-class>
9             org.springframework.web.filter.DelegatingFilterProxy
10        </filter-class>
11    </filter>
12
13    <!-- The definition of the Root Spring Container shared by all Servlets
14    <context-param>
15        <param-name>contextConfigLocation</param-name>
16        <param-value>/WEB-INF/spring/root-context.xml</param-value>
17    </context-param>
18
```

Ajout d'une balise 'filter'

**ATTENTION :**

Le nom dans la balise <filter-name> doit être exactement celui indiqué car il fait référence à l'id d'un bean Spring défini dans la partie security

Préciser ensuite la classe associée

web.xml root-context... security-con... servlet-con...

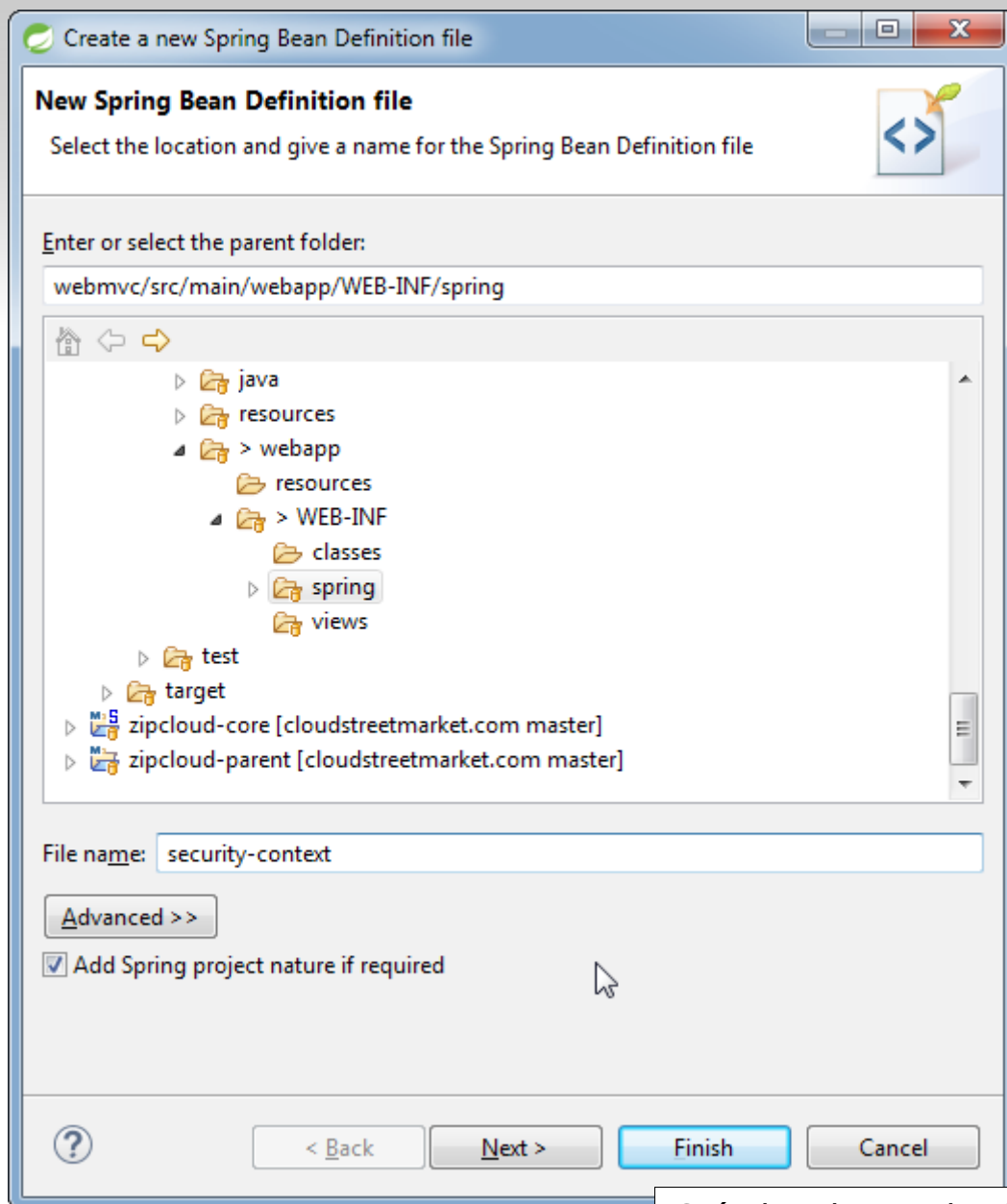
```

1 <?xml version="1.0" encoding="UTF-8" ?>
2 <web-app version="2.5" xmlns="http://java.sun.com/xml/ns/javaee"
3     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4     xsi:schemaLocation="http://java.sun.com/xml/ns/javaee http://java.sun.com/xml/ns/javaee/xsd
5
6     <filter>
7         <filter-name>springSecurityFilterChain</filter-name>
8         <filter-class>
9             org.springframework.web.filter.DelegatingFilterProxy</filter-class>
10     </filter>
11
12     <filter-mapping>
13         <filter-name>springSecurityFilterChain</filter-name>
14         <url-pattern>/*</url-pattern>
15     </filter-mapping>
16
17
18 <!-- The definition of the Root Spring Container shared by all

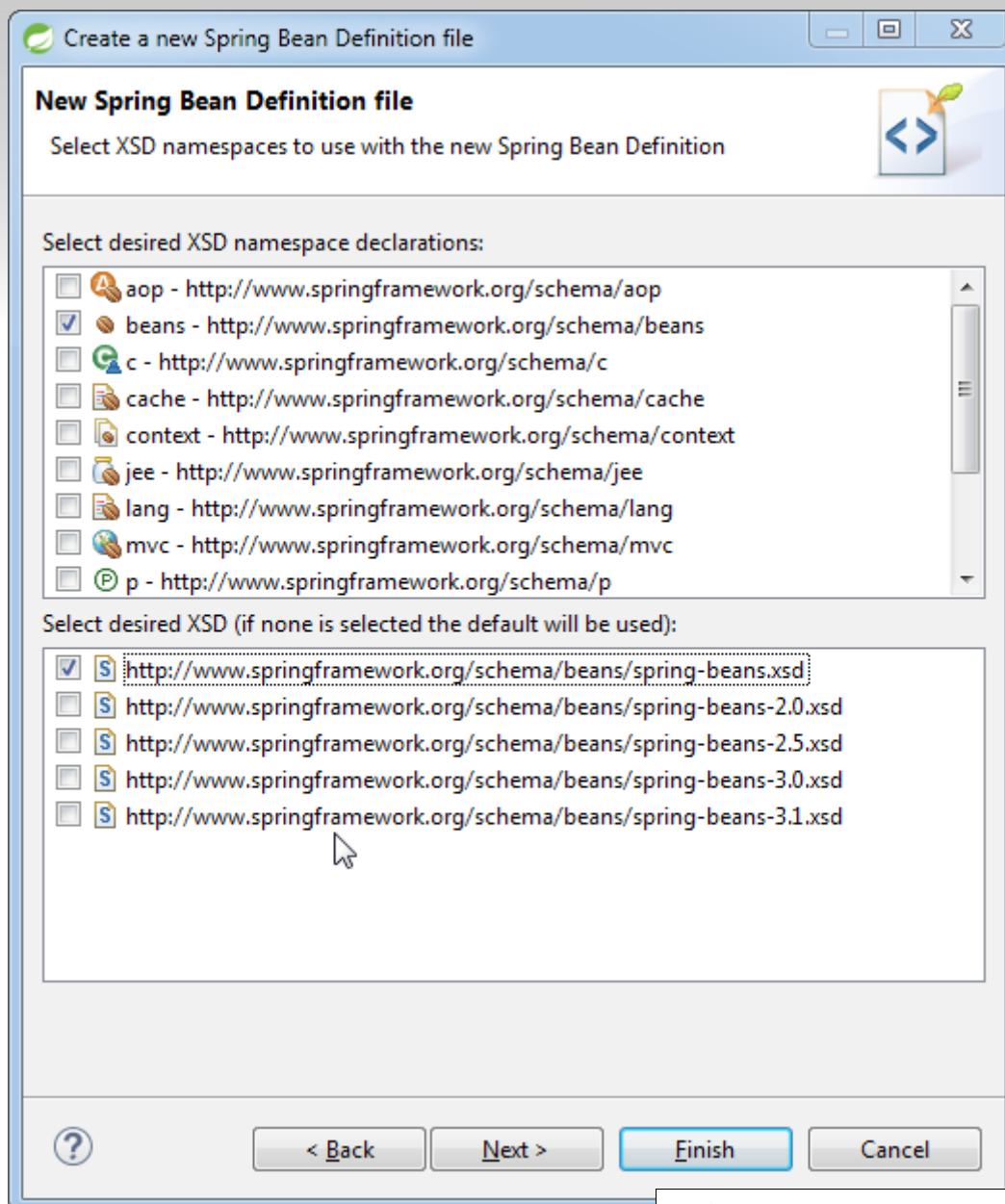
```

Déclarer ensuite avec filter-mapping pour quelles url on veut que ce filtre soit activé (ici toutes)

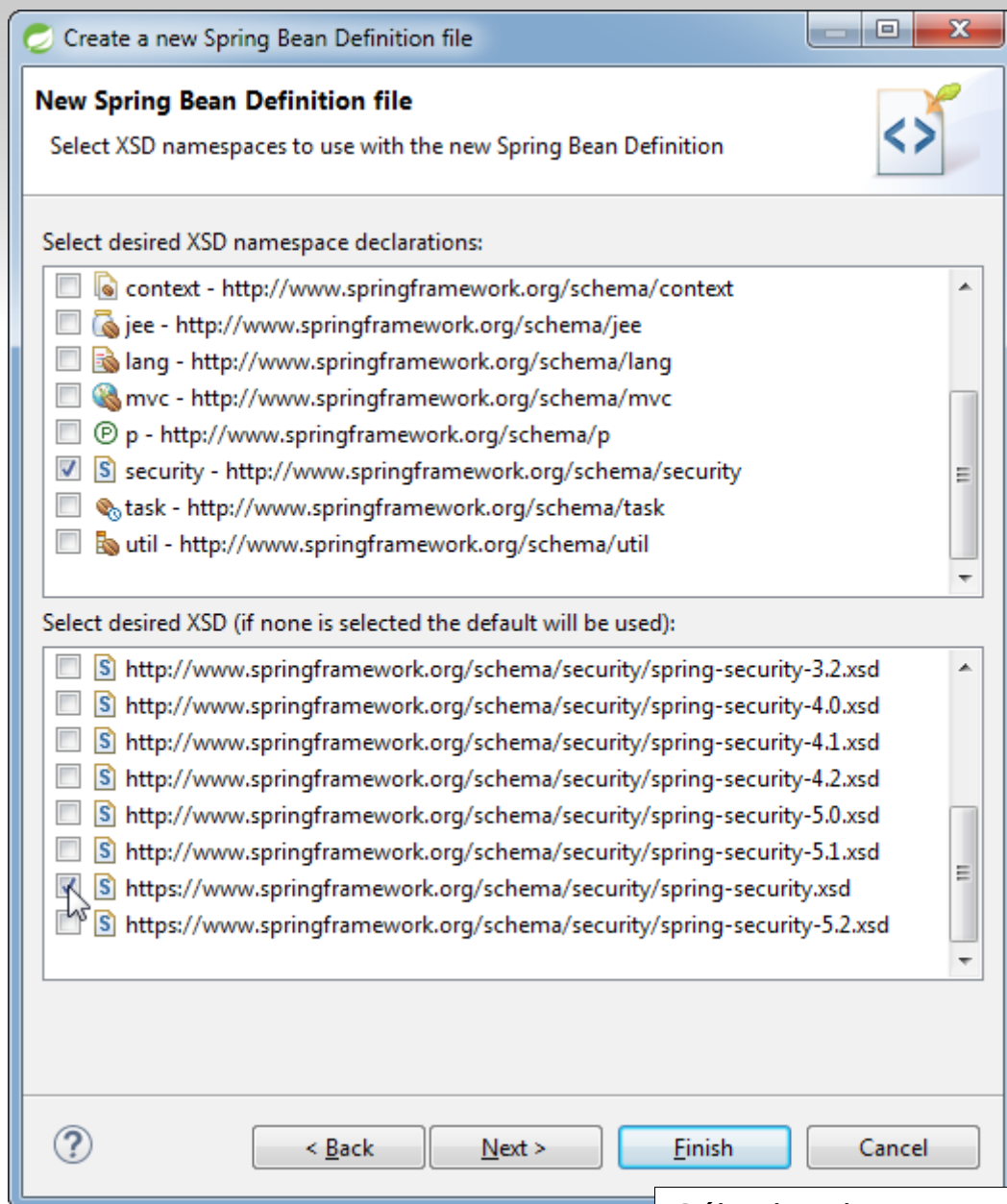
# Création d'un fichier de configuration pour la sécurité



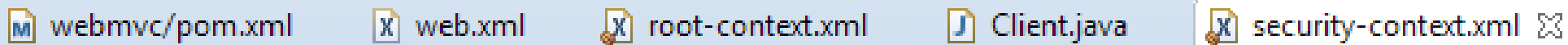
Création d'un spring bean configuration file



Sélection du namespace bean



Sélection du namespace security puis 'finish'



```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <beans xmlns="http://www.springframework.org/schema/beans"
3     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4     xmlns:security="http://www.springframework.org/schema/security"
5     xsi:schemaLocation="http://www.springframework.org/schema/beans
6     http://www.springframework.org/schema/beans/spring-beans.xsd
7     http://www.springframework.org/schema/security
8     https://www.springframework.org/schema/security/spring-security.xsd">
9
10     <security:authentication-manager>
11
12     </security:authentication-manager>
13
14
15 </beans>
16
```

## Le résultat dans la partie code source



```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <beans:beans xmlns:beans="http://www.springframework.org/schema/beans"
3   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4   xmlns="http://www.springframework.org/schema/security"
5   xsi:schemaLocation="http://www.springframework.org/schema/beans
6     http://www.springframework.org/schema/beans/spring-beans.xsd
7     http://www.springframework.org/schema/security
8     https://www.springframework.org/schema/security/spring-security.xsd">
9
10  <authentication-manager>
11
12  </authentication-manager>
13
14
15 </beans:beans>
16
```

**Variante pour faciliter l'écriture de la configuration :**

- on fait en sorte que l'espace de noms par défaut soit security ( en supprimant 'security'
- on préfixe l'espace de noms initial avec 'xmlns:beans'
- on préfixe les balises <beans> en <beans:beans>

```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <beans xmlns="http://www.springframework.org/schema/beans"
3     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4     xsi:schemaLocation="http://www.springframework.org/schema/beans
5     http://www.springframework.org/schema/beans/spring-beans.xsd">
6
7     <!-- Root Context: defines shared resources visible to all other web
8     <import resource="security-context.xml"/>
9     <!-- bean id="client" class="fr.formation.model.Client"></bean> -->
10 </beans>
11
```

Déclaration de ce fichier dans le contexte global de l'application

# Déclaration des règles de sécurité

webmvc/pom.xml   web.xml   root-context.xml   \*security-context...   servlet-context.xml   État HTTP

```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <beans:beans xmlns:beans="http://www.springframework.org/schema/beans"
3   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4   xmlns="http://www.springframework.org/schema/security"
5   xsi:schemaLocation="http://www.springframework.org/schema/security
6     http://www.springframework.org/schema/security/spring-security.xsd
7     http://www.springframework.org/schema/beans
8     http://www.springframework.org/schema/beans/spring-beans.xsd">
9
10   <authentication-manager>
11     <authentication-provider>
12       <user-service>
13         <user name="admin" password="adminMdp" authorities="ROLE_ADMIN, ROLE_USER"/>
14         <user name="user" password="userMdp" authorities="ROLE_USER" />
15       </user-service>
16     </authentication-provider>
17   </authentication-manager>
18
19
20
21 </beans:beans>
22
```

Error occured processing XML 'org.springframework.util.Assert.notNull(Ljava/lang/Object;Ljava/util/function/Supplier;)V'. See Error Log for more details

Edit property

Name: spring.security.version

Value: 3.2.10|RELEASE

OK Cancel

**Attribute : authorities**  
One of more authorities granted to the user. Separate authorities with a comma (but no space). For example, "ROLE\_USER,ROLE\_ADMINISTRATOR"

**Data Type : token**

*Préfixe 'ROLE\_' obligatoire, suffixe libre*

Tous les tags sont acceptés mais il subsiste une erreur qui est liée à la différence de versions entre Spring.framework et Spring security

=> il faut changer la version de cette dernière

web.xml root-context.xml security-context.xml servlet-context.xml admin.jsp home.jsp

```

1 <?xml version="1.0" encoding="UTF-8"?>
2 <beans:beans xmlns:beans="http://www.springframework.org/schema/beans"
3   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4   xmlns="http://www.springframework.org/schema/security"
5   xsi:schemaLocation="http://www.springframework.org/schema/security
6     http://www.springframework.org/schema/security/spring-security.xsd
7     http://www.springframework.org/schema/beans
8     http://www.springframework.org/schema/beans/spring-beans.xsd">
9
10   <authentication-manager>
11     <authentication-provider>
12       <user-service>
13         <user name="admin" password="adminMdp" authorities="ROLE_ADMIN, ROLE_USER"/>
14         <user name="user" password="userMdp" authorities="ROLE_USER" />
15       </user-service>
16     </authentication-provider>
17   </authentication-manager>
18
19   <http auto-config="true">
20     <intercept-url pattern="/admin/**" access="ROLE_ADMIN"/>
21
22   </http>
23

```

#### Element : http

Container element for HTTP security configuration. Multiple elements can now be defined, each with a specific pattern to which the enclosed security configuration applies. A pattern can also be configured to bypass Spring Security's filters completely by setting the "security" attribute to "none".

**Content Model :** (intercept-url | access-denied-handler | form-login | openid-login | x509 | jee | http-basic | logout | session-management | remember-me | anonymous | port-mappings custom-filter | request-cache | expression-handler | headers | cors)\*

#### Attribute : auto-config

A legacy attribute which automatically registers a login form, BASIC authentication and a logout URL and logout services. If unspecified, defaults to "false". We'd recommend you avoid using this and instead explicitly configure the services you require.

#### Data Type : boolean

#### Enumerated Values :

- true
- false

Press 'F2' for focus

Voir explications pour auto-config : authentication et logout sont gérés  
**<intercept-url>** définit le pattern d'url pour lequel l'authentification sera active

```
web.xml  root-context.xml  security-context.xml  servlet-context.xml  admin.jsp  home.jsp
1  <?xml version="1.0" encoding="UTF-8"?>
2  <beans:beans xmlns:beans="http://www.springframework.org/schema/beans"
3      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
4      xmlns="http://www.springframework.org/schema/security"
5      xsi:schemaLocation="http://www.springframework.org/schema/security
6      http://www.springframework.org/schema/security/spring-security.xsd
7      http://www.springframework.org/schema/beans
8      http://www.springframework.org/schema/beans/spring-beans.xsd">
9
10     <authentication-manager>
11         <authentication-provider>
12             <user-service>
13                 <user name="admin" password="adminMdp" authorities="ROLE_ADMIN, ROLE_USER"/>
14                 <user name="user" password="userMdp" authorities="ROLE_USER" />
15             </user-service>
16         </authentication-provider>
17     </authentication-manager>
18
19     <http auto-config="true">
20         <intercept-url pattern="/admin/**" access="ROLE_ADMIN"/>
21
22     </http>
23
24
25
26 </beans:beans>
```

Pour la gestion du logout, une balise peut être définie avec l'url cible lors de la déconnexion :

```
<logout logout-success-url="/welcome" />
```

### Login with Username and Password

User:

Password:

Login

Your login attempt was not successful, try again.

Reason: Bad credentials

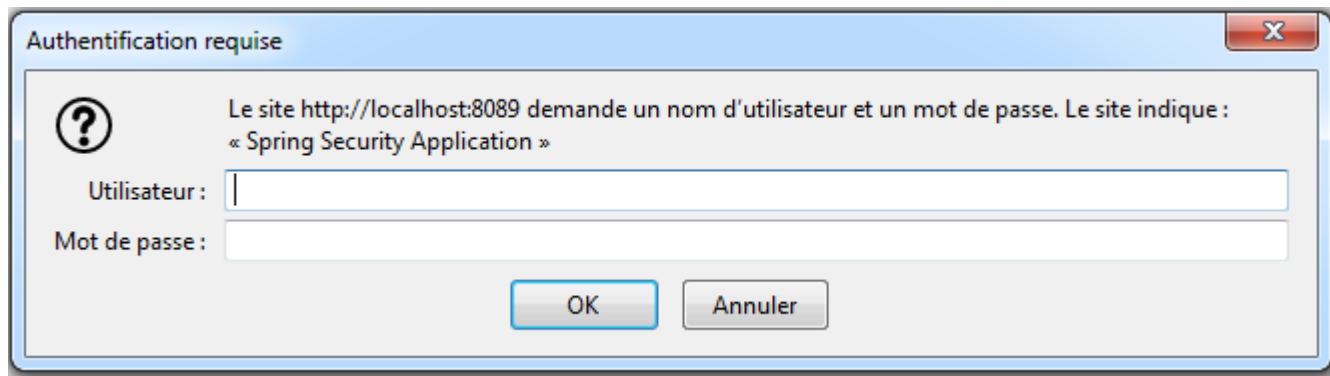
### Login with Username and Password

User:

Password:

Login

Le formulaire de connexion  
si la balise `<http>` ne contient pas `<http-basic/>`



Le formulaire de connexion  
si la balise `<http>` contient `<http-basic/>`



```

39  @RequestMapping(value = "/admin**", method = RequestMethod.GET)
40  public String adminPage(Model model) {
41
42      model.addAttribute("message", "Page d'administration" );
43
44      return "admin";
45  }
46
47  }

```

La définition de l'url pour l'administration

```

HomeController.java  web.xml  root-context.xml  security-context.xml  servlet-context.xml  admin.jsp  home.jsp
30
31 <table>
32 <tr><th>action </th><th>description</th></tr>
33 <tr><td><a href="effacerClient">effacer</a></td><td>effacement d'un client</td></tr>
34 <tr><td><a href="editerClient">éditer</a></td><td>formulaire d'édition des données du client</td></tr>
35 <tr><td><a href="c:url value="/j_spring_security_logout" />" >déconnexion</a></td><td>quitter le mode admin</td></tr>
36

```

# Bonjour !

Page d'administration.

action	description
<a href="#">effacer</a>	effacement d'un client
<a href="#">éditer</a>	formulaire d'édition des données du client
<a href="#">déconnexion</a>	quitter le mode admin

# Bonjour !

The time on the server is 20 novembre 2019 01:21:03 CET.

url	description
<a href="#">test2</a>	utilisation de ModelAndView
<a href="#">test 2a</a>	utilisation de Model
<a href="#">test3 ok</a>	@RequestParam (paramètre attendu ET fourni)
<a href="#">test3 ko</a>	@RequestParam (paramètre attendu ET non fourni)
<a href="#">test 3a ok</a>	@RequestParam (paramètre optionnel ET fourni)
<a href="#">test 3a ko</a>	@RequestParam (paramètre optionnel ET non fourni)
<a href="#">test 3b ok</a>	param (int). optionnel @RequestParam
<a href="#">test 3b ko</a>	param (int). optionnel @RequestParam
<a href="#">ajout client</a>	formulaire vide
<a href="#">ajouter client</a>	formulaire pré rempli (modification de données)

Le lien déconnexion pointe vers une url (virtuelle) spécifique gérée par Spring...  
 ... qui renvoie sur la page d'accueil par défaut  
 (si aucune consigne n'est précisée)