

## LANCLEMENT DU SERVEUR

- 1) Se placer dans le répertoire webCryptoDocker.
- 2) Lancez la commande « docker-compose up ».
- 3) Après le lancement des différents services de l'application, ouvrez Firefox, et saisissez l'url suivante: « <https://192.168.99.100/keycloak/auth> » ou « <https://localhost/keycloak/auth> »
- 4) Entrez les identifiants suivant:
  - Login: admin
  - Mot de passe: admin
- 5) Vous arriverez sur la page suivante:

The screenshot shows the Keycloak Admin Console interface. On the left, there's a sidebar with sections like 'Master', 'Configure', and 'Manage'. Under 'Configure', 'Realm Settings' is selected. The main area shows the 'Master' realm configuration. The 'General' tab is active. The 'Name' field is set to 'master'. The 'Display name' field is set to 'Keycloak' (with a red arrow pointing to it). The 'HTML Display name' field contains the code '<div class="kc-logo-text"><span>Keycloak</span></div>'. The 'Enabled' switch is set to 'ON'. The 'User-Managed Access' switch is set to 'OFF'. Under 'Endpoints', there are links for 'OpenID Endpoint Configuration' and 'SAML 2.0 Identity Provider Metadata'. At the bottom right of the form are 'Save' and 'Cancel' buttons.

Il vous faut désormais ajouter un royaume.  
Pour cela, survolez Master dans le coin supérieur gauche de la fenêtre, et cliquez sur « Add realm »

6) Remplissez les champs comme ci dessous:

The screenshot shows the 'Add realm' interface in the Keycloak Admin Console. On the left, there's a sidebar titled 'Select realm' with a dropdown menu. The main area is titled 'Add realm'. It has fields for 'Import' (with a 'Select file' button), 'Name \*' (containing 'ragnarok' with a red arrow pointing to it), 'Enabled' (set to 'ON'), and 'Create' and 'Cancel' buttons at the bottom. The URL in the browser is <https://192.168.99.100/keycloak/auth/admin/master/console/#/create/realm>.

Validez vos informations en cliquant sur le bouton « Create »

7) Remplissez les champs comme ci dessous:

The screenshot shows the 'Ragnarok' realm configuration page in the Keycloak Admin Console. The left sidebar shows 'Ragnarok' selected. The main area has tabs for General, Login, Keys, Email, Themes, Cache, Tokens, Client Registration, and Security Defenses. The 'General' tab is active. It shows fields for 'Name' (ragnarok), 'Display name' (Mon coffre - login with a red arrow pointing to it), 'HTML Display name' (Mon coffre - login with a red arrow pointing to it), 'Enabled' (ON), 'User-Managed Access' (OFF), and 'Endpoints' (OpenID Endpoint Configuration, SAML 2.0 Identity Provider Metadata). At the bottom are 'Save' and 'Cancel' buttons. The URL in the browser is <https://192.168.99.100/keycloak/auth/admin/master/console/#/realms/ragnarok>.

Sauvegardez en appuyant sur « Save »

## 8) Permettez l'ajout de nouveaux clients via la page de connexion

Ragnarok

Configure

Realm Settings

Clients

Client Scopes

Roles

Identity Providers

User Federation

Authentication

Manage

Groups

Users

Sessions

Events

Import

Export

General Login Keys Email Themes Cache Tokens Client Registration Security Defenses

User registration  ON

Email as username  OFF

Edit username  OFF

Forgot password  OFF

Remember Me  OFF

Verify email  OFF

Login with email  ON

Require SSL  external requests

Save Cancel

## 9) Créez un client dans ce royaume

Ragnarok

Configure

Realm Settings

Clients

Client Scopes

Roles

Identity Providers

User Federation

Authentication

Manage

Groups

Users

Sessions

Events

Import

Export

Clients

Lookup

Search... Q Create

Client ID	Enabled	Base URL	Actions
account	True	/keycloak/auth/realms/ragnarok/account	Edit Export Delete
admin-cli	True	Not defined	Edit Export Delete
broker	True	Not defined	Edit Export Delete
realm-management	True	Not defined	Edit Export Delete
security-admin-console	True	/keycloak/auth/admin/ragnarok/console/index.html	Edit Export Delete

Appuyez sur le bouton « Create », dans l'onglet « Clients ».

Activités Navigateur Web Firefox mar. 15:40

Keycloak Admin Console - Mozilla Firefox

Keycloak Admin Console X + https://192.168.99.100/keycloak/auth/admin/master/console/#/create/client/ragnarok Rechercher

**KEYCLOAK**

Ragnarok

Configure

- Realm Settings
- Clients**
- Client Scopes
- Roles
- Identity Providers
- User Federation
- Authentication

Manage

- Groups
- Users
- Sessions
- Events
- Import
- Export

Clients » Add Client

Add Client

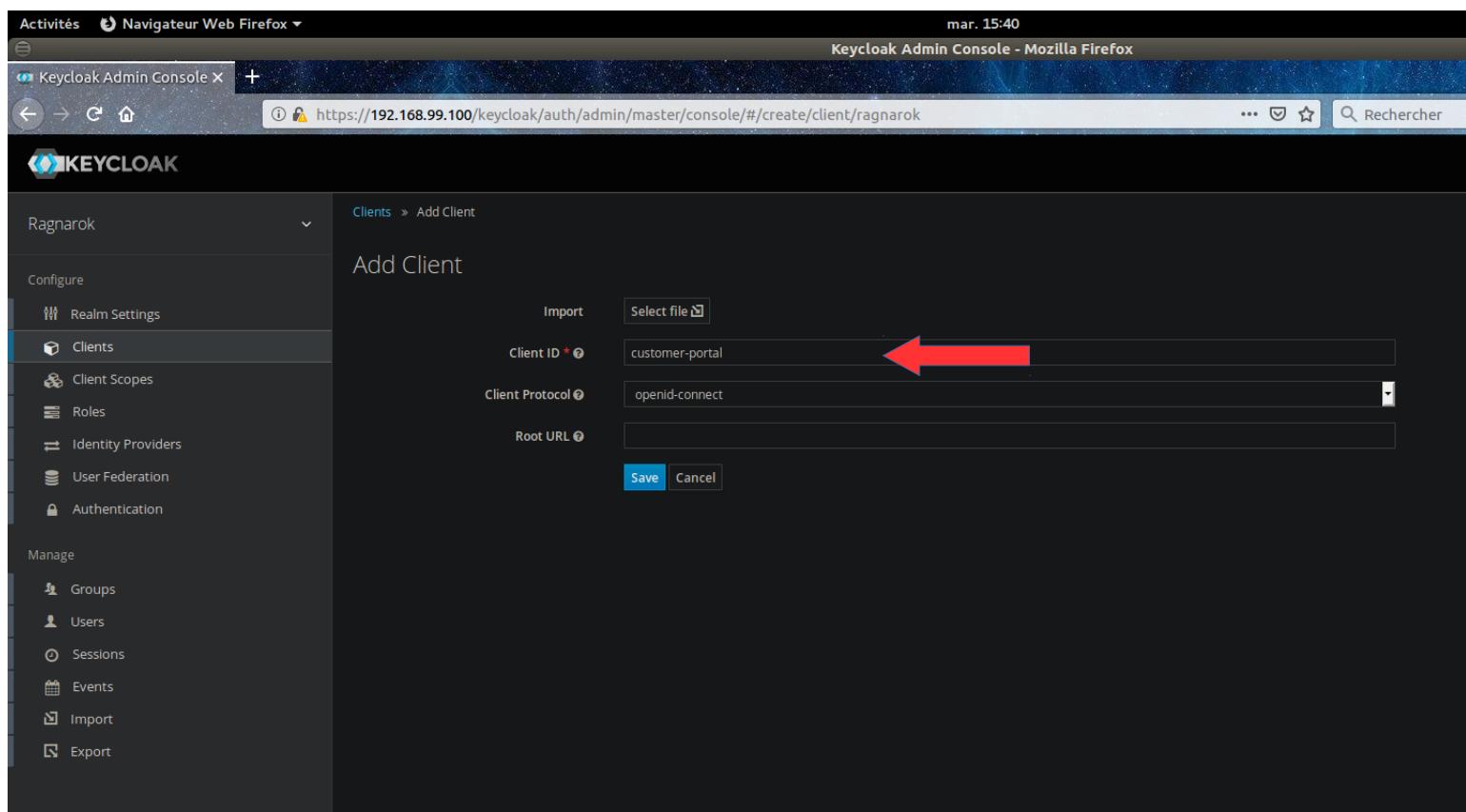
Import Select file

Client ID \* **customer-portal** ←

Client Protocol openid-connect

Root URL

Save Cancel



Confirmez la création en appuyant sur « Save »

10)

The screenshot shows the Keycloak administration interface for a client named 'customer-portal'. The left sidebar shows the 'Ragnarok' realm with various management options like Groups, Users, Sessions, Events, Import, and Export. The main page displays the 'Customer-portal' client settings. Several fields are highlighted with red arrows:

- Access Type**: Set to 'confidential'.
- Service Accounts Enabled**: Set to 'ON'.
- Authorization Enabled**: Set to 'ON'.
- \* Valid Redirect URIs**: Contains the value 'https://192.168.99.100/\*'.
- Web Origins**: Contains the value 'https://192.168.99.100/\*'.

Si vous avez des problèmes de « CORS POLICY » ou de « INVALID REDIRECT URI » remplissez les champs « Valid Redirect URIs » et « Web Origins » avec « \* » (déconseillé)

## 11) Créez un Mapper:

The screenshot shows two screenshots of the Keycloak Admin Console interface.

**Screenshot 1: Client Mappers List**

This screenshot shows the 'Mappers' tab in the 'Customer-portal' client configuration. A red arrow points down to the 'Create' button at the top right of the table header. The table lists three mappers:

Name	Category	Type	Priority Order	Actions
Client IP Address	Token mapper	User Session Note	0	Edit Delete
Client ID	Token mapper	User Session Note	0	Edit Delete
Client Host	Token mapper	User Session Note	0	Edit Delete

**Screenshot 2: Create Protocol Mapper Form**

This screenshot shows the 'Create Protocol Mapper' form. A red arrow points down to the 'Save' button at the bottom right. The form fields are as follows:

- Protocol: openid-connect
- Name: username
- Mapper Type: User Property
- Property: username
- Token Claim Name: user\_name
- Claim JSON Type: String
- Add to ID token: ON
- Add to access token: ON
- Add to userinfo: ON

Sauvegardez vos modifications en appuyant sur le bouton « Save ».

12) Il faut désormais changer le secret dans le code JavaScript pour qu'il corresponde à celui du client que l'on a ajouté précédemment.

The screenshot shows the Keycloak Admin Console interface. The left sidebar is for the realm 'Ragnarok' and includes sections for Configure, Realm Settings, Clients, Client Scopes, Roles, Identity Providers, User Federation, and Authentication. The 'Clients' section is currently selected. The main area is titled 'Clients' and contains a table with the following data:

Client ID	Enabled	Base URL
account	True	/keycloak/auth/realms/ragnarok/account
admin-cli	True	Not defined
broker	True	Not defined
customer-portal	True	Not defined
realm-management	True	Not defined
security-admin-console	True	/keycloak/auth/admin/ragnarok/console/index.html

A red arrow points to the 'customer-portal' row in the table.

Copier le secret et le mettre dans le JavaScript comme ci-dessous:

The screenshot shows the Keycloak Admin Console interface. On the left, a sidebar menu includes 'Clients', which is currently selected. The main area displays the 'customer-portal' client. The 'Credentials' tab is active, showing the 'Client Id and Secret' section. The 'Secret' field contains the value '695401f0-a811-42d4-814b-fa6b68afbb43'. A red arrow points down to this field, and another red arrow points right to the 'Regenerate Secret' button.

```
client.js
client.js
File Edit View Selection Find Packages Help
1 // Variables de verification de support d'IndexedDB
2 window.indexedDB = window.indexedDB || window.mozIndexedDB || window.webkitIndexedDB || window.msIndexedDB;
3 window.IDBTransaction = window.IDBTransaction || window.webkitIDBTransaction || window.msIDBTransaction;
4 window.IDBKeyRange = window.IDBKeyRange || window.webkitIDBKeyRange || window.msIDBKeyRange;
5
6
7 // Test de support d'IndexedDB
8 if (!window.indexedDB){
9   window.alert("Votre navigateur ne supporte pas une version stable d'IndexedDB. Quelques fonctionnalités ne seront pas disponibles.")
10 }
11
12 // Variables a demarrer
13 var db;
14 var store;
15 var completeCrypto = "";
16 var currentPassword = "";
17 var list = []
18 var urlc = "https://192.168.99.100:443/myresource";
19 var crypto = window.crypto;
20 var dbName = "";
21 var keycloak = Keycloak({
22   "realm": "ragnarok",
23   "auth-server-url": "https://192.168.99.100/keycloak/auth",
24   "url": "https://192.168.99.100/keycloak/auth",
25   "clientId": "customer-portal",
26   "ssl-required": "external",
27   "resource": "customer-portal",
28   "credentials": {
29     "secret": "695401f0-a811-42d4-814b-fa6b68afbb43"
30   },
31   "enable-cors": true
32 });
33
34
```

### 13) Copiez coller le certificat dans « webCryptoServeur/src/main/resources/keycloak.pem »

Activités Navigateur Web Firefox mar. 17:01 Keycloak Admin Console - Mozilla Firefox

Keycloak Admin Console X MonCoffre + https://192.168.99.100/keycloak/auth/admin/master/console/#/realms/ragnarok/keys

Ragnarok

Configure

Realm Settings

- Clients
- Client Scopes
- Roles
- Identity Providers
- User Federation
- Authentication

Manage

- Groups
- Users
- Sessions
- Events
- Import
- Export

Ragnarok

General Login Keys Email Themes Cache Tokens Client Registration Security Defenses

Active Passive Disabled Providers

Algorithm	Type	Kid	Priority	Provider	Public keys
RS256	RSA	V7ka20m2z53eMchTrNo5mtP6BtTg90OMG4XccE8ol	100	rsa-generated	Public key
HS256	OCT	898736a7-28a5-4a89-a0a9-e72ab084a874	100	hmac-generated	
AES	OCT	66d2487b-fb8c-4698-9512-d7bdca1a0e96	100	aes-generated	

Activités Navigateur Web Firefox mar. 17:02 Keycloak Admin Console - Mozilla Firefox

Keycloak Admin Console X MonCoffre + https://192.168.99.100/keycloak/auth/admin/master/console/#/realms/ragnarok/keys

Ragnarok

Configure

Realm Settings

- Clients
- Client Scopes
- Roles
- Identity Providers
- User Federation
- Authentication

Manage

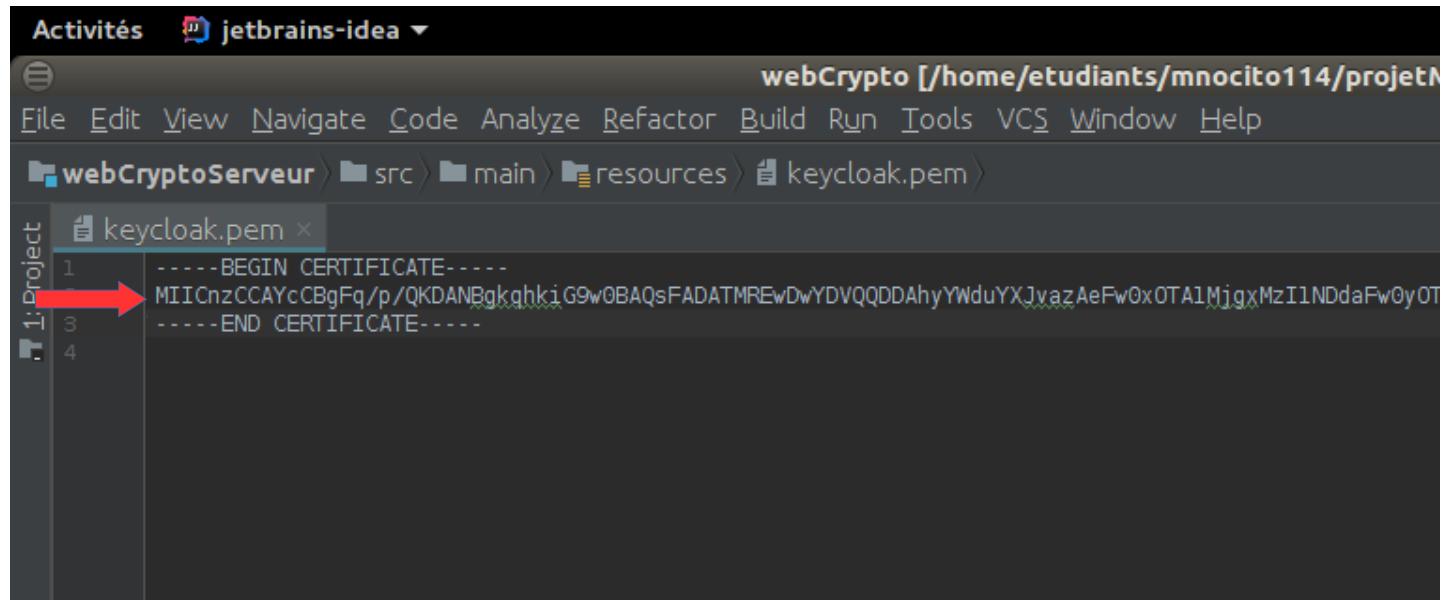
- Groups
- Users
- Sessions
- Events
- Import
- Export

Ragnarok

General Login Keys Email Themes

Active Passive Disabled Providers

Algorithm	Type	Kid	Priority	Provider	Public keys
RS256	RSA	V7ka20m2z53eMchTrNo5mtP6BtTg90OMG4XccE8ol	00	rsa-generated	Public key
HS256	OCT	898736a7-28a5-4a89-a0a9-e72ab084a874	00	hmac-generated	
AES	OCT	66d2487b-fb8c-4698-9512-d7bdca1a0e96	00	aes-generated	



The screenshot shows the IntelliJ IDEA interface with the project 'webCrypto' open. In the 'Project' tool window, there is a file named 'keycloak.pem'. The code editor shows the following content:

```
-----BEGIN CERTIFICATE-----  
MIICnzCCAYcCBgFq/p/QKDANBgkghkiG9w0BAQsFADATMREwDwYDVQQDDAhyYWduYXJvazAeFw0xOTAlMjgxMzI1NDdaFw0yOTIwMjEwMDAxMjIwMjAx-----END CERTIFICATE-----
```

A red arrow points to the start of the certificate data, specifically to the line '-----BEGIN CERTIFICATE-----'.

14) Vous devez relancer l'application, en lançant les commandes suivantes à partir d'un nouveau terminal:

```
$ docker-compose build  
$ docker-compose up -d
```

15) Vous pouvez désormais accéder à l'application à partir de l'URL suivante:

« <https://192.168.99.100/monappli> » ou « <https://localhost/monappli> »