Configurez le 802.1x - PEAP avec FreeRadius et WLC 8.3

Contenu

Introduction

Ceci documente explique comment installer un WLAN (réseau local sans fil) avec la Sécurité de 802.1x et le PEAP (Protected Extensible Authentication Protocol) comme EAP (Extensible Authentication Protocol). FreeRADIUS est utilisé en tant que serveur externe de Service RADIUS (Remote Authentication Dial-In User Service).

Conditions préalables

Cisco recommande que vous ayez la connaissance de base de l'éditeur de Linux, de score et des contrôleurs LAN Sans fil d'AireOS (WLCs).

> Remarque: Ce document est destiné pour donner aux lecteurs un exemple sur la configuration exigée sur un serveur de freeRADIUS pour l'authentification PEAP-MS-CHAPv2. La configuration du serveur de freeRADIUS présentée dans ce document a été testée dans le laboratoire et avérée pour fonctionner comme prévue. Le centre d'assistance technique Cisco (TAC) ne prend en charge pas la configuration du serveur de freeRADIUS.

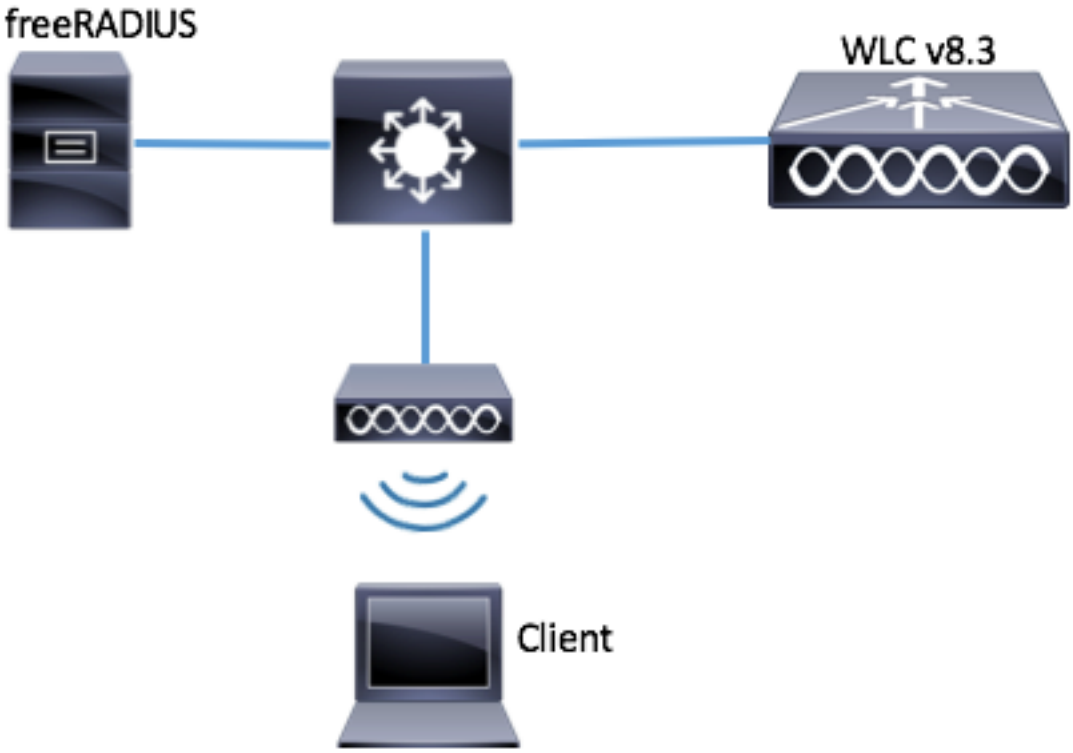
Composants utilisés

- CentOS7 ou Red Hat Enterprise Linux 7 (RHEL7) (recommandé 1 RAM et au moins 20 Go HDD de Go)
- WLC 5508 v8.3
- MariaDB (MySQL)
- FreeRADIUS

- PHP 7

Les informations contenues dans ce document ont été créées à partir des périphériques d'un environnement de laboratoire spécifique. Tous les périphériques utilisés dans ce document ont démarré avec une configuration effacée (par défaut). Si votre réseau est opérationnel, assurez-vous que vous comprenez l'effet potentiel de toute commande.

Diagramme du réseau



Configuration

Installez le serveur et le MariaDB httpd

Étape 1. Exécutez ces commandes d'installer le serveur et le MariaDB httpd.

```
[root@tac-mxwireless ~]# yum -y update
[root@tac-mxwireless ~]# yum -y groupinstall "Development Tools"
[root@tac-mxwireless ~]# yum -y install httpd httpd-devel mariadb-server mariadb
```

Étape 2. Mettez en marche et activez httpd (Apache) et serveur de MariaDB.

```
[root@tac-mxwireless ~]# systemctl enable httpd
[root@tac-mxwireless ~]# systemctl start httpd
[root@tac-mxwireless ~]# systemctl start mariadb
[root@tac-mxwireless ~]# systemctl enable mariadb
```

Étape 3. Configurez les configurations initiales de MariaDB pour la sécuriser.

```
[root@tac-mxwireless ~]#mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB SERVERS IN PRODUCTION USE!
PLEASE READ EACH STEP CAREFULLY! In order to log into MariaDB to secure it, we'll need the
current password for the root user. If you've just installed MariaDB, and you haven't set the
root password yet, the password will be blank, so you should just press enter here. Enter
current password for root (enter for none): OK, successfully used password, moving on... Setting
```

the root password ensures that nobody can log into the MariaDB root user without the proper authorisation. Set root password? [Y/n] Y New password: Re-enter new password: Password updated successfully! Reloading privilege tables.. ... Success! By default, a MariaDB installation has an anonymous user, allowing anyone to log into MariaDB without having to have a user account created for them. This is intended only for testing, and to make the installation go a bit smoother. You should remove them before moving into a production environment. Remove anonymous users? [Y/n] y ... Success! Normally, root should only be allowed to connect from 'localhost'. This ensures that someone cannot guess at the root password from the network. Disallow root login remotely? [Y/n] y ... Success! By default, MariaDB comes with a database named 'test' that anyone can access. This is also intended only for testing, and should be removed before moving into a production environment. Remove test database and access to it? [Y/n] y - Dropping test database... ... Success! - Removing privileges on test database... ... Success! Reloading the privilege tables will ensure that all changes made so far will take effect immediately. Reload privilege tables now? [Y/n] y ... Success! Cleaning up... All done! If you've completed all of the above steps, your MariaDB installation should now be secure. Thanks for using MariaDB!

Étape 4. Configurez la base de données pour le freeRADIUS (utilisez le même mot de passe configuré dans l'étape 3).

```
[root@tac-mxwireless ~]#mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY! In order to log into MariaDB to secure it, we'll need the current password for the root user. If you've just installed MariaDB, and you haven't set the root password yet, the password will be blank, so you should just press enter here. Enter current password for root (enter for none): OK, successfully used password, moving on... Setting the root password ensures that nobody can log into the MariaDB root user without the proper authorisation. Set root password? [Y/n] Y New password: Re-enter new password: Password updated successfully! Reloading privilege tables.. ... Success! By default, a MariaDB installation has an anonymous user, allowing anyone to log into MariaDB without having to have a user account created for them. This is intended only for testing, and to make the installation go a bit smoother. You should remove them before moving into a production environment. Remove anonymous users? [Y/n] y ... Success! Normally, root should only be allowed to connect from 'localhost'. This ensures that someone cannot guess at the root password from the network. Disallow root login remotely? [Y/n] y ... Success! By default, MariaDB comes with a database named 'test' that anyone can access. This is also intended only for testing, and should be removed before moving into a production environment. Remove test database and access to it? [Y/n] y - Dropping test database... ... Success! - Removing privileges on test database... ... Success! Reloading the privilege tables will ensure that all changes made so far will take effect immediately. Reload privilege tables now? [Y/n] y ... Success! Cleaning up... All done! If you've completed all of the above steps, your MariaDB installation should now be secure. Thanks for using MariaDB!
```

Installez PHP 7 sur CentOS 7

Étape 1. Exécutez ces commandes d'installer PHP 7 sur CentOS7.

```
[root@tac-mxwireless ~]#mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY! In order to log into MariaDB to secure it, we'll need the current password for the root user. If you've just installed MariaDB, and you haven't set the root password yet, the password will be blank, so you should just press enter here. Enter current password for root (enter for none): OK, successfully used password, moving on... Setting the root password ensures that nobody can log into the MariaDB root user without the proper authorisation. Set root password? [Y/n] Y New password: Re-enter new password: Password updated successfully! Reloading privilege tables.. ... Success! By default, a MariaDB installation has an anonymous user, allowing anyone to log into MariaDB without having to have a user account created for them. This is intended only for testing, and to make the installation go a bit smoother. You should remove them before moving into a production environment. Remove anonymous users? [Y/n] y ... Success! Normally, root should only be allowed to connect from 'localhost'. This ensures that someone cannot guess at the root password from the network. Disallow root login remotely? [Y/n] y ... Success! By default, MariaDB comes with a database named 'test' that anyone can access. This is also intended only for testing, and should be removed before moving
```

```
into a production environment. Remove test database and access to it? [Y/n] y - Dropping test database... ... Success! - Removing privileges on test database... ... Success! Reloading the privilege tables will ensure that all changes made so far will take effect immediately. Reload privilege tables now? [Y/n] y ... Success! Cleaning up... All done! If you've completed all of the above steps, your MariaDB installation should now be secure. Thanks for using MariaDB!
```

Installez FreeRADIUS

Étape 1. Exécutez cette commande d'installer FreeRADIUS.

```
[root@tac-mxwireless ~]#mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY! In order to log into MariaDB to secure it, we'll need the current password for the root user. If you've just installed MariaDB, and you haven't set the root password yet, the password will be blank, so you should just press enter here. Enter current password for root (enter for none): OK, successfully used password, moving on... Setting the root password ensures that nobody can log into the MariaDB root user without the proper authorisation. Set root password? [Y/n] Y New password: Re-enter new password: Password updated successfully! Reloading privilege tables.. ... Success! By default, a MariaDB installation has an anonymous user, allowing anyone to log into MariaDB without having to have a user account created for them. This is intended only for testing, and to make the installation go a bit smoother. You should remove them before moving into a production environment. Remove anonymous users? [Y/n] y ... Success! Normally, root should only be allowed to connect from 'localhost'. This ensures that someone cannot guess at the root password from the network. Disallow root login remotely? [Y/n] y ... Success! By default, MariaDB comes with a database named 'test' that anyone can access. This is also intended only for testing, and should be removed before moving into a production environment. Remove test database and access to it? [Y/n] y - Dropping test database... ... Success! - Removing privileges on test database... ... Success! Reloading the privilege tables will ensure that all changes made so far will take effect immediately. Reload privilege tables now? [Y/n] y ... Success! Cleaning up... All done! If you've completed all of the above steps, your MariaDB installation should now be secure. Thanks for using MariaDB!
```

Étape 2. Faites *radius.servicestart* après mariadb.service.

Exécutez cette commande :

```
[root@tac-mxwireless ~]#mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY! In order to log into MariaDB to secure it, we'll need the current password for the root user. If you've just installed MariaDB, and you haven't set the root password yet, the password will be blank, so you should just press enter here. Enter current password for root (enter for none): OK, successfully used password, moving on... Setting the root password ensures that nobody can log into the MariaDB root user without the proper authorisation. Set root password? [Y/n] Y New password: Re-enter new password: Password updated successfully! Reloading privilege tables.. ... Success! By default, a MariaDB installation has an anonymous user, allowing anyone to log into MariaDB without having to have a user account created for them. This is intended only for testing, and to make the installation go a bit smoother. You should remove them before moving into a production environment. Remove anonymous users? [Y/n] y ... Success! Normally, root should only be allowed to connect from 'localhost'. This ensures that someone cannot guess at the root password from the network. Disallow root login remotely? [Y/n] y ... Success! By default, MariaDB comes with a database named 'test' that anyone can access. This is also intended only for testing, and should be removed before moving into a production environment. Remove test database and access to it? [Y/n] y - Dropping test database... ... Success! - Removing privileges on test database... ... Success! Reloading the privilege tables will ensure that all changes made so far will take effect immediately. Reload privilege tables now? [Y/n] y ... Success! Cleaning up... All done! If you've completed all of the above steps, your MariaDB installation should now be secure. Thanks for using MariaDB!
```

Ajoutez une ligne dans **[la** section d'**unité]** :

```
[root@tac-mxwireless ~]#mysql_secure_installation
```

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY! In order to log into MariaDB to secure it, we'll need the current password for the root user. If you've just installed MariaDB, and you haven't set the root password yet, the password will be blank, so you should just press enter here. Enter current password for root (enter for none): OK, successfully used password, moving on... Setting the root password ensures that nobody can log into the MariaDB root user without the proper authorisation. Set root password? [Y/n] Y New password: Re-enter new password: Password updated successfully! Reloading privilege tables.. ... Success! By default, a MariaDB installation has an anonymous user, allowing anyone to log into MariaDB without having to have a user account created for them. This is intended only for testing, and to make the installation go a bit smoother. You should remove them before moving into a production environment. Remove anonymous users? [Y/n] y ... Success! Normally, root should only be allowed to connect from 'localhost'. This ensures that someone cannot guess at the root password from the network. Disallow root login remotely? [Y/n] y ... Success! By default, MariaDB comes with a database named 'test' that anyone can access. This is also intended only for testing, and should be removed before moving into a production environment. Remove test database and access to it? [Y/n] y - Dropping test database... ... Success! - Removing privileges on test database... ... Success! Reloading the privilege tables will ensure that all changes made so far will take effect immediately. Reload privilege tables now? [Y/n] y ... Success! Cleaning up... All done! If you've completed all of the above steps, your MariaDB installation should now be secure. Thanks for using MariaDB!

[La section d'unité] doit ressembler à ceci :

```
[root@tac-mxwireless ~]#mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY! In order to log into MariaDB to secure it, we'll need the current password for the root user. If you've just installed MariaDB, and you haven't set the root password yet, the password will be blank, so you should just press enter here. Enter current password for root (enter for none): OK, successfully used password, moving on... Setting the root password ensures that nobody can log into the MariaDB root user without the proper authorisation. Set root password? [Y/n] Y New password: Re-enter new password: Password updated successfully! Reloading privilege tables.. ... Success! By default, a MariaDB installation has an anonymous user, allowing anyone to log into MariaDB without having to have a user account created for them. This is intended only for testing, and to make the installation go a bit smoother. You should remove them before moving into a production environment. Remove anonymous users? [Y/n] y ... Success! Normally, root should only be allowed to connect from 'localhost'. This ensures that someone cannot guess at the root password from the network. Disallow root login remotely? [Y/n] y ... Success! By default, MariaDB comes with a database named 'test' that anyone can access. This is also intended only for testing, and should be removed before moving into a production environment. Remove test database and access to it? [Y/n] y - Dropping test database... ... Success! - Removing privileges on test database... ... Success! Reloading the privilege tables will ensure that all changes made so far will take effect immediately. Reload privilege tables now? [Y/n] y ... Success! Cleaning up... All done! If you've completed all of the above steps, your MariaDB installation should now be secure. Thanks for using MariaDB!
```

Étape 3. Commencez et permettez au freeradius de commencer à l'amorce.

```
[root@tac-mxwireless ~]#mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY! In order to log into MariaDB to secure it, we'll need the current password for the root user. If you've just installed MariaDB, and you haven't set the root password yet, the password will be blank, so you should just press enter here. Enter current password for root (enter for none): OK, successfully used password, moving on... Setting the root password ensures that nobody can log into the MariaDB root user without the proper authorisation. Set root password? [Y/n] Y New password: Re-enter new password: Password updated successfully! Reloading privilege tables.. ... Success! By default, a MariaDB installation has an anonymous user, allowing anyone to log into MariaDB without having to have a user account created for them. This is intended only for testing, and to make the installation go a bit smoother. You should remove them before moving into a production environment. Remove anonymous users? [Y/n] y ... Success! Normally, root should only be allowed to connect from 'localhost'. This ensures that someone cannot guess at the root password from the network. Disallow root login remotely? [Y/n] y ... Success! By default, MariaDB comes with a database named 'test' that anyone can access. This is also intended only for testing, and should be removed before moving
```

into a production environment. Remove test database and access to it? [Y/n] y - Dropping test database... ... Success! - Removing privileges on test database... ... Success! Reloading the privilege tables will ensure that all changes made so far will take effect immediately. Reload privilege tables now? [Y/n] y ... Success! Cleaning up... All done! If you've completed all of the above steps, your MariaDB installation should now be secure. Thanks for using MariaDB!

Étape 4. Firewalld d'enable pour la Sécurité.

```
[root@tac-mxwireless ~]#mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY! In order to log into MariaDB to secure it, we'll need the current password for the root user. If you've just installed MariaDB, and you haven't set the root password yet, the password will be blank, so you should just press enter here. Enter current password for root (enter for none): OK, successfully used password, moving on... Setting the root password ensures that nobody can log into the MariaDB root user without the proper authorisation. Set root password? [Y/n] Y New password: Re-enter new password: Password updated successfully! Reloading privilege tables.. ... Success! By default, a MariaDB installation has an anonymous user, allowing anyone to log into MariaDB without having to have a user account created for them. This is intended only for testing, and to make the installation go a bit smoother. You should remove them before moving into a production environment. Remove anonymous users? [Y/n] y ... Success! Normally, root should only be allowed to connect from 'localhost'. This ensures that someone cannot guess at the root password from the network. Disallow root login remotely? [Y/n] y ... Success! By default, MariaDB comes with a database named 'test' that anyone can access. This is also intended only for testing, and should be removed before moving into a production environment. Remove test database and access to it? [Y/n] y - Dropping test database... ... Success! - Removing privileges on test database... ... Success! Reloading the privilege tables will ensure that all changes made so far will take effect immediately. Reload privilege tables now? [Y/n] y ... Success! Cleaning up... All done! If you've completed all of the above steps, your MariaDB installation should now be secure. Thanks for using MariaDB!
```

Étape 5. Ajoutez les règles permanentes de transférer la zone pour permettre le HTTP, les https et les services RADIUS.

```
[root@tac-mxwireless ~]#mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY! In order to log into MariaDB to secure it, we'll need the current password for the root user. If you've just installed MariaDB, and you haven't set the root password yet, the password will be blank, so you should just press enter here. Enter current password for root (enter for none): OK, successfully used password, moving on... Setting the root password ensures that nobody can log into the MariaDB root user without the proper authorisation. Set root password? [Y/n] Y New password: Re-enter new password: Password updated successfully! Reloading privilege tables.. ... Success! By default, a MariaDB installation has an anonymous user, allowing anyone to log into MariaDB without having to have a user account created for them. This is intended only for testing, and to make the installation go a bit smoother. You should remove them before moving into a production environment. Remove anonymous users? [Y/n] y ... Success! Normally, root should only be allowed to connect from 'localhost'. This ensures that someone cannot guess at the root password from the network. Disallow root login remotely? [Y/n] y ... Success! By default, MariaDB comes with a database named 'test' that anyone can access. This is also intended only for testing, and should be removed before moving into a production environment. Remove test database and access to it? [Y/n] y - Dropping test database... ... Success! - Removing privileges on test database... ... Success! Reloading the privilege tables will ensure that all changes made so far will take effect immediately. Reload privilege tables now? [Y/n] y ... Success! Cleaning up... All done! If you've completed all of the above steps, your MariaDB installation should now be secure. Thanks for using MariaDB!
```

Étape 6. Firewalld de recharge pour que les modifications les prennent effet.

```
[root@tac-mxwireless ~]#mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY! In order to log into MariaDB to secure it, we'll need the current password for the root user. If you've just installed MariaDB, and you haven't set the root password yet, the password will be blank, so you should just press enter here. Enter
```

current password for root (enter for none): OK, successfully used password, moving on... Setting the root password ensures that nobody can log into the MariaDB root user without the proper authorisation. Set root password? [Y/n] Y New password: Re-enter new password: Password updated successfully! Reloading privilege tables.. ... Success! By default, a MariaDB installation has an anonymous user, allowing anyone to log into MariaDB without having to have a user account created for them. This is intended only for testing, and to make the installation go a bit smoother. You should remove them before moving into a production environment. Remove anonymous users? [Y/n] y ... Success! Normally, root should only be allowed to connect from 'localhost'. This ensures that someone cannot guess at the root password from the network. Disallow root login remotely? [Y/n] y ... Success! By default, MariaDB comes with a database named 'test' that anyone can access. This is also intended only for testing, and should be removed before moving into a production environment. Remove test database and access to it? [Y/n] y - Dropping test database... ... Success! - Removing privileges on test database... ... Success! Reloading the privilege tables will ensure that all changes made so far will take effect immediately. Reload privilege tables now? [Y/n] y ... Success! Cleaning up... All done! If you've completed all of the above steps, your MariaDB installation should now be secure. Thanks for using MariaDB!

Configurez FreeRADIUS

Afin de configurer FreeRADIUS pour utiliser MariaDB, suivez ces étapes.

Étape 1. Importez le schéma de RADIUSdatabase de remplir base de données de RAYON.

```
[root@tac-mxwireless ~]#mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY! In order to log into MariaDB to secure it, we'll need the current password for the root user. If you've just installed MariaDB, and you haven't set the root password yet, the password will be blank, so you should just press enter here. Enter current password for root (enter for none): OK, successfully used password, moving on... Setting the root password ensures that nobody can log into the MariaDB root user without the proper authorisation. Set root password? [Y/n] Y New password: Re-enter new password: Password updated successfully! Reloading privilege tables.. ... Success! By default, a MariaDB installation has an anonymous user, allowing anyone to log into MariaDB without having to have a user account created for them. This is intended only for testing, and to make the installation go a bit smoother. You should remove them before moving into a production environment. Remove anonymous users? [Y/n] y ... Success! Normally, root should only be allowed to connect from 'localhost'. This ensures that someone cannot guess at the root password from the network. Disallow root login remotely? [Y/n] y ... Success! By default, MariaDB comes with a database named 'test' that anyone can access. This is also intended only for testing, and should be removed before moving into a production environment. Remove test database and access to it? [Y/n] y - Dropping test database... ... Success! - Removing privileges on test database... ... Success! Reloading the privilege tables will ensure that all changes made so far will take effect immediately. Reload privilege tables now? [Y/n] y ... Success! Cleaning up... All done! If you've completed all of the above steps, your MariaDB installation should now be secure. Thanks for using MariaDB!
```

Étape 2. Créez un lien mou pour le SQL sous */etc/raddb/mods-enabled*

```
[root@tac-mxwireless ~]#mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY! In order to log into MariaDB to secure it, we'll need the current password for the root user. If you've just installed MariaDB, and you haven't set the root password yet, the password will be blank, so you should just press enter here. Enter current password for root (enter for none): OK, successfully used password, moving on... Setting the root password ensures that nobody can log into the MariaDB root user without the proper authorisation. Set root password? [Y/n] Y New password: Re-enter new password: Password updated successfully! Reloading privilege tables.. ... Success! By default, a MariaDB installation has an anonymous user, allowing anyone to log into MariaDB without having to have a user account created for them. This is intended only for testing, and to make the installation go a bit smoother. You should remove them before moving into a production environment. Remove anonymous users? [Y/n] y ... Success! Normally, root should only be allowed to connect from 'localhost'. This ensures that someone cannot guess at the root password from the network. Disallow root
```

login remotely? [Y/n] y ... Success! By default, MariaDB comes with a database named 'test' that anyone can access. This is also intended only for testing, and should be removed before moving into a production environment. Remove test database and access to it? [Y/n] y - Dropping test database... ... Success! - Removing privileges on test database... ... Success! Reloading the privilege tables will ensure that all changes made so far will take effect immediately. Reload privilege tables now? [Y/n] y ... Success! Cleaning up... All done! If you've completed all of the above steps, your MariaDB installation should now be secure. Thanks for using MariaDB!

Étape 3. Configurez le module */raddb/mods-available/sql* SQL et changez les paramètres de Connexion de la base de données à la suite votre environnement.

```
[root@tac-mxwireless ~]#mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY! In order to log into MariaDB to secure it, we'll need the current password for the root user. If you've just installed MariaDB, and you haven't set the root password yet, the password will be blank, so you should just press enter here. Enter current password for root (enter for none): OK, successfully used password, moving on... Setting the root password ensures that nobody can log into the MariaDB root user without the proper authorisation. Set root password? [Y/n] Y New password: Re-enter new password: Password updated successfully! Reloading privilege tables.. ... Success! By default, a MariaDB installation has an anonymous user, allowing anyone to log into MariaDB without having to have a user account created for them. This is intended only for testing, and to make the installation go a bit smoother. You should remove them before moving into a production environment. Remove anonymous users? [Y/n] y ... Success! Normally, root should only be allowed to connect from 'localhost'. This ensures that someone cannot guess at the root password from the network. Disallow root login remotely? [Y/n] y ... Success! By default, MariaDB comes with a database named 'test' that anyone can access. This is also intended only for testing, and should be removed before moving into a production environment. Remove test database and access to it? [Y/n] y - Dropping test database... ... Success! - Removing privileges on test database... ... Success! Reloading the privilege tables will ensure that all changes made so far will take effect immediately. Reload privilege tables now? [Y/n] y ... Success! Cleaning up... All done! If you've completed all of the above steps, your MariaDB installation should now be secure. Thanks for using MariaDB!
```

La section SQL doit sembler semblable à ci-dessous.

```
[root@tac-mxwireless ~]#mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY! In order to log into MariaDB to secure it, we'll need the current password for the root user. If you've just installed MariaDB, and you haven't set the root password yet, the password will be blank, so you should just press enter here. Enter current password for root (enter for none): OK, successfully used password, moving on... Setting the root password ensures that nobody can log into the MariaDB root user without the proper authorisation. Set root password? [Y/n] Y New password: Re-enter new password: Password updated successfully! Reloading privilege tables.. ... Success! By default, a MariaDB installation has an anonymous user, allowing anyone to log into MariaDB without having to have a user account created for them. This is intended only for testing, and to make the installation go a bit smoother. You should remove them before moving into a production environment. Remove anonymous users? [Y/n] y ... Success! Normally, root should only be allowed to connect from 'localhost'. This ensures that someone cannot guess at the root password from the network. Disallow root login remotely? [Y/n] y ... Success! By default, MariaDB comes with a database named 'test' that anyone can access. This is also intended only for testing, and should be removed before moving into a production environment. Remove test database and access to it? [Y/n] y - Dropping test database... ... Success! - Removing privileges on test database... ... Success! Reloading the privilege tables will ensure that all changes made so far will take effect immediately. Reload privilege tables now? [Y/n] y ... Success! Cleaning up... All done! If you've completed all of the above steps, your MariaDB installation should now be secure. Thanks for using MariaDB!
```

Étape 4. Juste de groupe de modification de */etc/raddb/mods-enabled/sql au* radiusd.

```
[root@tac-mxwireless ~]#mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY! In order to log into MariaDB to secure it, we'll need the
```

current password for the root user. If you've just installed MariaDB, and you haven't set the root password yet, the password will be blank, so you should just press enter here. Enter current password for root (enter for none): OK, successfully used password, moving on... Setting the root password ensures that nobody can log into the MariaDB root user without the proper authorisation. Set root password? [Y/n] Y New password: Re-enter new password: Password updated successfully! Reloading privilege tables.. ... Success! By default, a MariaDB installation has an anonymous user, allowing anyone to log into MariaDB without having to have a user account created for them. This is intended only for testing, and to make the installation go a bit smoother. You should remove them before moving into a production environment. Remove anonymous users? [Y/n] y ... Success! Normally, root should only be allowed to connect from 'localhost'. This ensures that someone cannot guess at the root password from the network. Disallow root login remotely? [Y/n] y ... Success! By default, MariaDB comes with a database named 'test' that anyone can access. This is also intended only for testing, and should be removed before moving into a production environment. Remove test database and access to it? [Y/n] y - Dropping test database... ... Success! - Removing privileges on test database... ... Success! Reloading the privilege tables will ensure that all changes made so far will take effect immediately. Reload privilege tables now? [Y/n] y ... Success! Cleaning up... All done! If you've completed all of the above steps, your MariaDB installation should now be secure. Thanks for using MariaDB!

Configurez WLC comme client d'AAA sur FreeRADIUS

Étape 1. Éditez */etc/raddb/clients.conf* afin de placer la clé partagée pour WLC.

```
[root@tac-mxwireless ~]#mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB SERVERS IN PRODUCTION USE!
PLEASE READ EACH STEP CAREFULLY! In order to log into MariaDB to secure it, we'll need the
current password for the root user. If you've just installed MariaDB, and you haven't set the
root password yet, the password will be blank, so you should just press enter here. Enter
current password for root (enter for none): OK, successfully used password, moving on... Setting
the root password ensures that nobody can log into the MariaDB root user without the proper
authorisation. Set root password? [Y/n] Y New password: Re-enter new password: Password updated
successfully! Reloading privilege tables.. ... Success! By default, a MariaDB installation has
an anonymous user, allowing anyone to log into MariaDB without having to have a user account
created for them. This is intended only for testing, and to make the installation go a bit
smoother. You should remove them before moving into a production environment. Remove anonymous
users? [Y/n] y ... Success! Normally, root should only be allowed to connect from 'localhost'.
This ensures that someone cannot guess at the root password from the network. Disallow root
login remotely? [Y/n] y ... Success! By default, MariaDB comes with a database named 'test' that
anyone can access. This is also intended only for testing, and should be removed before moving
into a production environment. Remove test database and access to it? [Y/n] y - Dropping test
database... ... Success! - Removing privileges on test database... ... Success! Reloading the
privilege tables will ensure that all changes made so far will take effect immediately. Reload
privilege tables now? [Y/n] y ... Success! Cleaning up... All done! If you've completed all of
the above steps, your MariaDB installation should now be secure. Thanks for using MariaDB!
```

Étape 2. Au bas ajoutez votre IP address de contrôleur et la clé partagée.

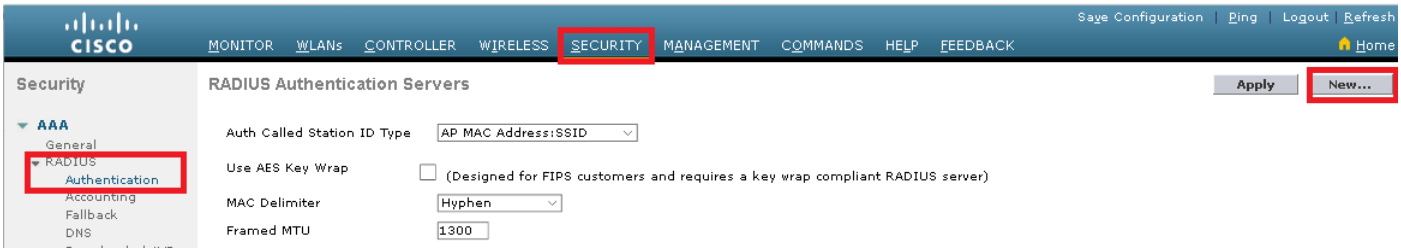
```
[root@tac-mxwireless ~]#mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB SERVERS IN PRODUCTION USE!
PLEASE READ EACH STEP CAREFULLY! In order to log into MariaDB to secure it, we'll need the
current password for the root user. If you've just installed MariaDB, and you haven't set the
root password yet, the password will be blank, so you should just press enter here. Enter
current password for root (enter for none): OK, successfully used password, moving on... Setting
the root password ensures that nobody can log into the MariaDB root user without the proper
authorisation. Set root password? [Y/n] Y New password: Re-enter new password: Password updated
successfully! Reloading privilege tables.. ... Success! By default, a MariaDB installation has
an anonymous user, allowing anyone to log into MariaDB without having to have a user account
created for them. This is intended only for testing, and to make the installation go a bit
smoother. You should remove them before moving into a production environment. Remove anonymous
```

users? [Y/n] y ... Success! Normally, root should only be allowed to connect from 'localhost'. This ensures that someone cannot guess at the root password from the network. Disallow root login remotely? [Y/n] y ... Success! By default, MariaDB comes with a database named 'test' that anyone can access. This is also intended only for testing, and should be removed before moving into a production environment. Remove test database and access to it? [Y/n] y - Dropping test database... ... Success! - Removing privileges on test database... ... Success! Reloading the privilege tables will ensure that all changes made so far will take effect immediately. Reload privilege tables now? [Y/n] y ... Success! Cleaning up... All done! If you've completed all of the above steps, your MariaDB installation should now be secure. Thanks for using MariaDB!

Configurez FreeRADIUS comme serveur de RAYON sur WLC

GUI :

Étape 1. Ouvrez le GUI du WLC et naviguez vers le **Security > Radius > Authentication > nouveau.**



Étape 2. Remplissez informations du serveur de RAYON.

CLI :

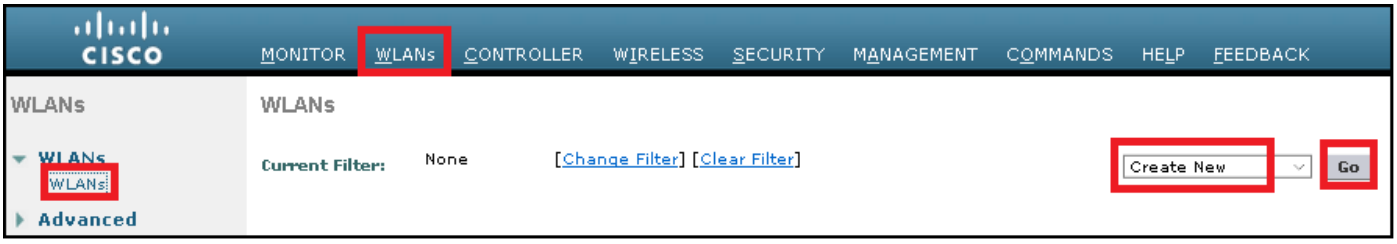
```
[root@tac-mxwireless ~]#mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB SERVERS IN PRODUCTION USE!
PLEASE READ EACH STEP CAREFULLY! In order to log into MariaDB to secure it, we'll need the
current password for the root user. If you've just installed MariaDB, and you haven't set the
root password yet, the password will be blank, so you should just press enter here. Enter
```

current password for root (enter for none): OK, successfully used password, moving on... Setting the root password ensures that nobody can log into the MariaDB root user without the proper authorisation. Set root password? [Y/n] Y New password: Re-enter new password: Password updated successfully! Reloading privilege tables.. ... Success! By default, a MariaDB installation has an anonymous user, allowing anyone to log into MariaDB without having to have a user account created for them. This is intended only for testing, and to make the installation go a bit smoother. You should remove them before moving into a production environment. Remove anonymous users? [Y/n] y ... Success! Normally, root should only be allowed to connect from 'localhost'. This ensures that someone cannot guess at the root password from the network. Disallow root login remotely? [Y/n] y ... Success! By default, MariaDB comes with a database named 'test' that anyone can access. This is also intended only for testing, and should be removed before moving into a production environment. Remove test database and access to it? [Y/n] y - Dropping test database... ... Success! - Removing privileges on test database... ... Success! Reloading the privilege tables will ensure that all changes made so far will take effect immediately. Reload privilege tables now? [Y/n] y ... Success! Cleaning up... All done! If you've completed all of the above steps, your MariaDB installation should now be secure. Thanks for using MariaDB!

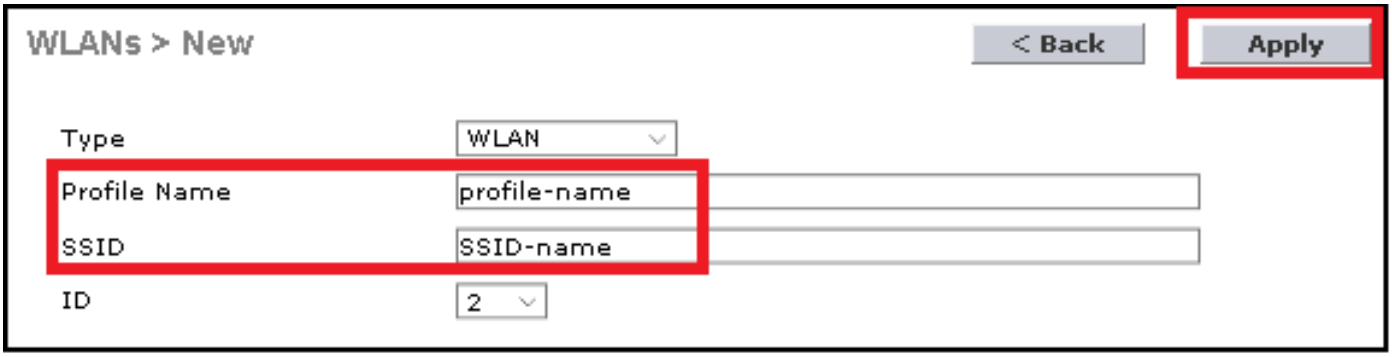
Configurez un WLAN

GUI :

Étape 1. Ouvrez le GUI du WLC et naviguez vers des **WLAN > créent nouveau > vont.**



Étape 2. Choisissez un nom pour le SSID et le profil, puis cliquez sur Apply.



CLI :

```
[root@tac-mxwireless ~]#mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB SERVERS IN PRODUCTION USE!
PLEASE READ EACH STEP CAREFULLY! In order to log into MariaDB to secure it, we'll need the
current password for the root user. If you've just installed MariaDB, and you haven't set the
root password yet, the password will be blank, so you should just press enter here. Enter
current password for root (enter for none): OK, successfully used password, moving on... Setting
the root password ensures that nobody can log into the MariaDB root user without the proper
authorisation. Set root password? [Y/n] Y New password: Re-enter new password: Password updated
successfully! Reloading privilege tables.. ... Success! By default, a MariaDB installation has
an anonymous user, allowing anyone to log into MariaDB without having to have a user account
created for them. This is intended only for testing, and to make the installation go a bit
smoother. You should remove them before moving into a production environment. Remove anonymous
users? [Y/n] y ... Success! Normally, root should only be allowed to connect from 'localhost'.
This ensures that someone cannot guess at the root password from the network. Disallow root
```

```
login remotely? [Y/n] y ... Success! By default, MariaDB comes with a database named 'test' that anyone can access. This is also intended only for testing, and should be removed before moving into a production environment. Remove test database and access to it? [Y/n] y - Dropping test database... ... Success! - Removing privileges on test database... ... Success! Reloading the privilege tables will ensure that all changes made so far will take effect immediately. Reload privilege tables now? [Y/n] y ... Success! Cleaning up... All done! If you've completed all of the above steps, your MariaDB installation should now be secure. Thanks for using MariaDB!
```

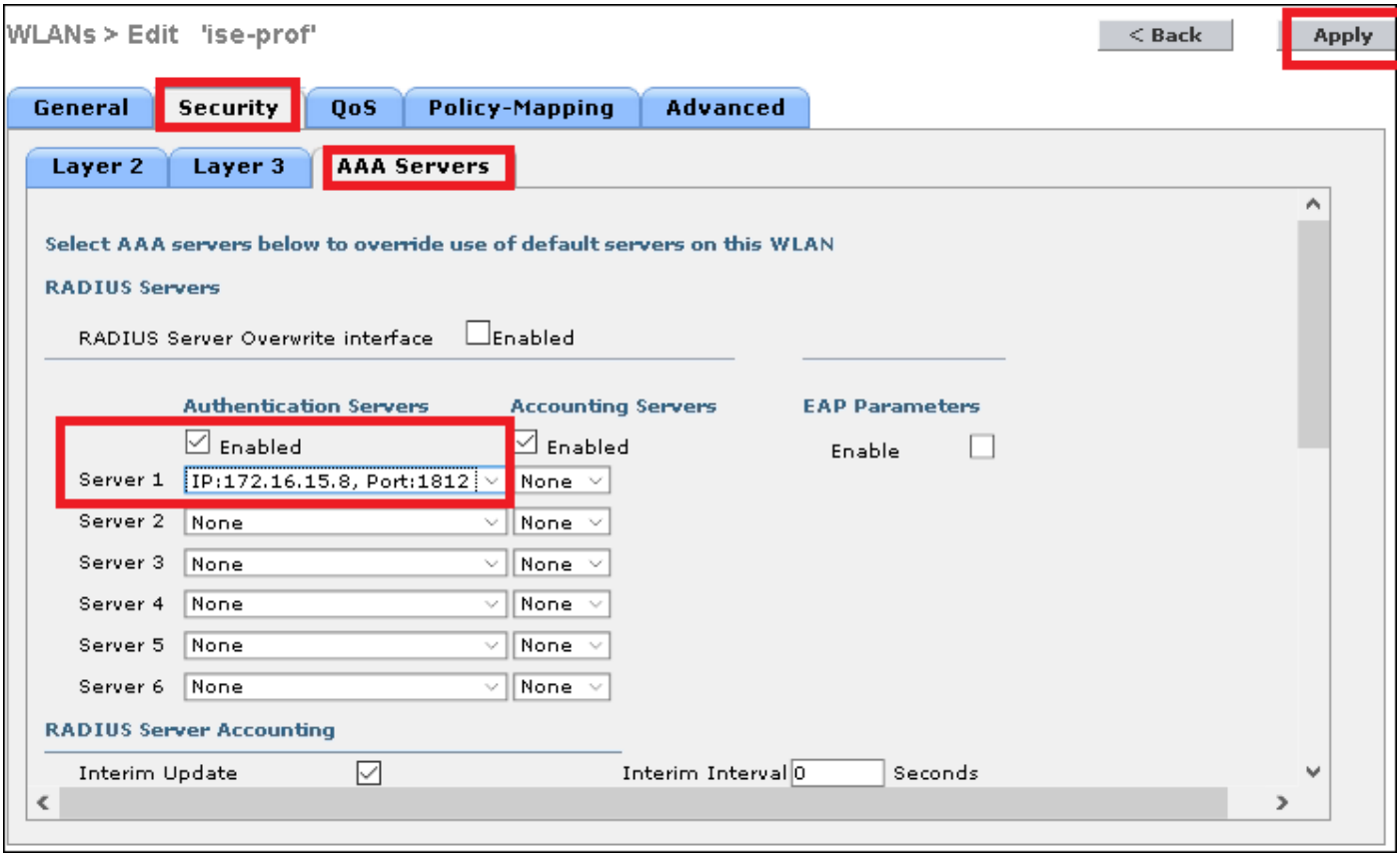
Étape 3. Affectez le serveur de RAYON au WLAN.

CLI :

```
[root@tac-mxwireless ~]#mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY! In order to log into MariaDB to secure it, we'll need the current password for the root user. If you've just installed MariaDB, and you haven't set the root password yet, the password will be blank, so you should just press enter here. Enter current password for root (enter for none): OK, successfully used password, moving on... Setting the root password ensures that nobody can log into the MariaDB root user without the proper authorisation. Set root password? [Y/n] Y New password: Re-enter new password: Password updated successfully! Reloading privilege tables.. ... Success! By default, a MariaDB installation has an anonymous user, allowing anyone to log into MariaDB without having to have a user account created for them. This is intended only for testing, and to make the installation go a bit smoother. You should remove them before moving into a production environment. Remove anonymous users? [Y/n] y ... Success! Normally, root should only be allowed to connect from 'localhost'. This ensures that someone cannot guess at the root password from the network. Disallow root login remotely? [Y/n] y ... Success! By default, MariaDB comes with a database named 'test' that anyone can access. This is also intended only for testing, and should be removed before moving into a production environment. Remove test database and access to it? [Y/n] y - Dropping test database... ... Success! - Removing privileges on test database... ... Success! Reloading the privilege tables will ensure that all changes made so far will take effect immediately. Reload privilege tables now? [Y/n] y ... Success! Cleaning up... All done! If you've completed all of the above steps, your MariaDB installation should now be secure. Thanks for using MariaDB!
```

GUI :

Naviguez vers le **Security > AAA Servers** et choisissez le serveur désiré de RAYON, puis le hit **s'appliquent.**

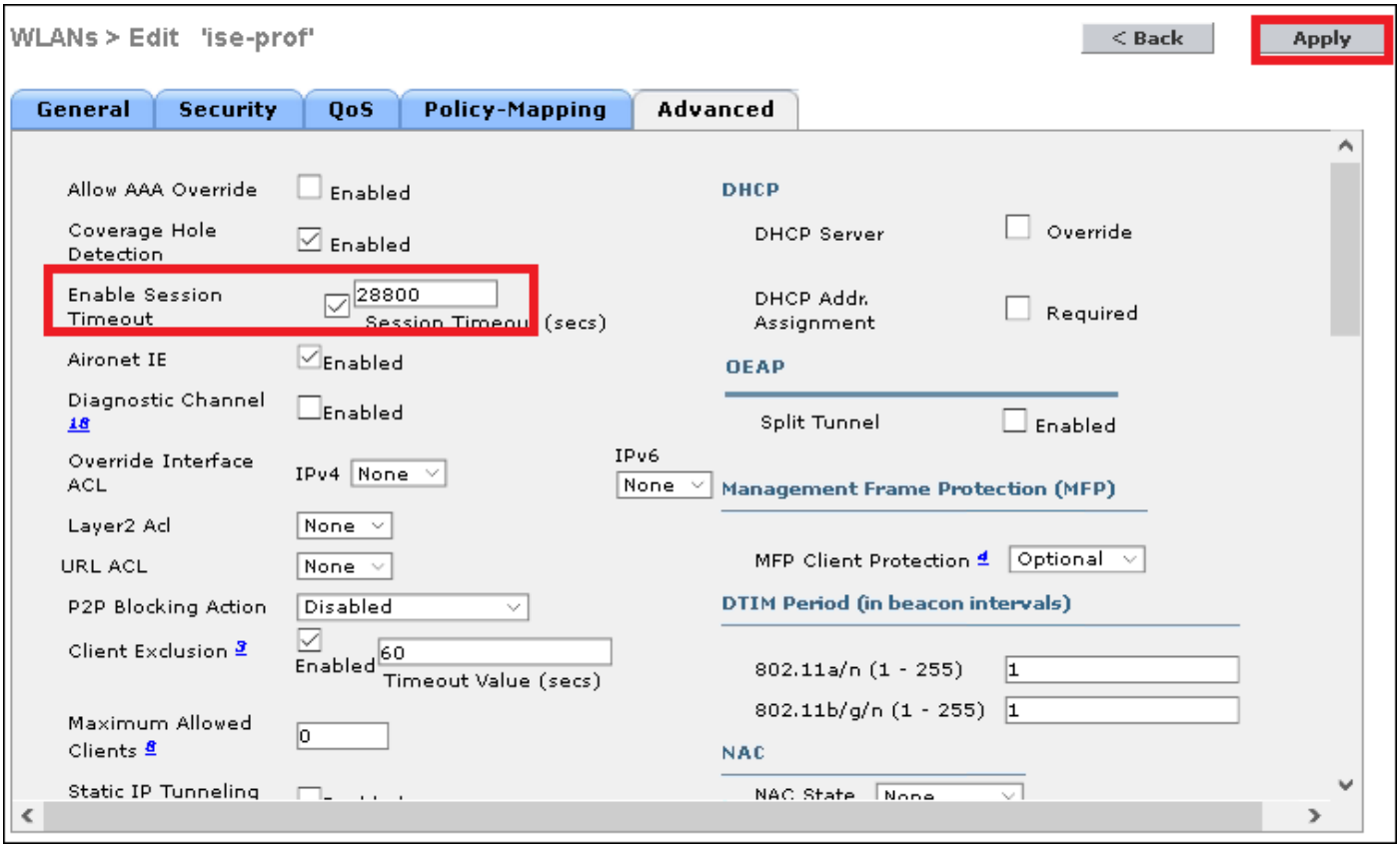


Étape 4. Augmentez sur option le délai d'attente de session

CLI :

```
[root@tac-mxwireless ~]#mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB SERVERS IN PRODUCTION USE!
PLEASE READ EACH STEP CAREFULLY! In order to log into MariaDB to secure it, we'll need the
current password for the root user. If you've just installed MariaDB, and you haven't set the
root password yet, the password will be blank, so you should just press enter here. Enter
current password for root (enter for none): OK, successfully used password, moving on... Setting
the root password ensures that nobody can log into the MariaDB root user without the proper
authorisation. Set root password? [Y/n] Y New password: Re-enter new password: Password updated
successfully! Reloading privilege tables.. ... Success! By default, a MariaDB installation has
an anonymous user, allowing anyone to log into MariaDB without having to have a user account
created for them. This is intended only for testing, and to make the installation go a bit
smoother. You should remove them before moving into a production environment. Remove anonymous
users? [Y/n] y ... Success! Normally, root should only be allowed to connect from 'localhost'.
This ensures that someone cannot guess at the root password from the network. Disallow root
login remotely? [Y/n] y ... Success! By default, MariaDB comes with a database named 'test' that
anyone can access. This is also intended only for testing, and should be removed before moving
into a production environment. Remove test database and access to it? [Y/n] y - Dropping test
database... ... Success! - Removing privileges on test database... ... Success! Reloading the
privilege tables will ensure that all changes made so far will take effect immediately. Reload
privilege tables now? [Y/n] y ... Success! Cleaning up... All done! If you've completed all of
the above steps, your MariaDB installation should now be secure. Thanks for using MariaDB!
```

GUI :

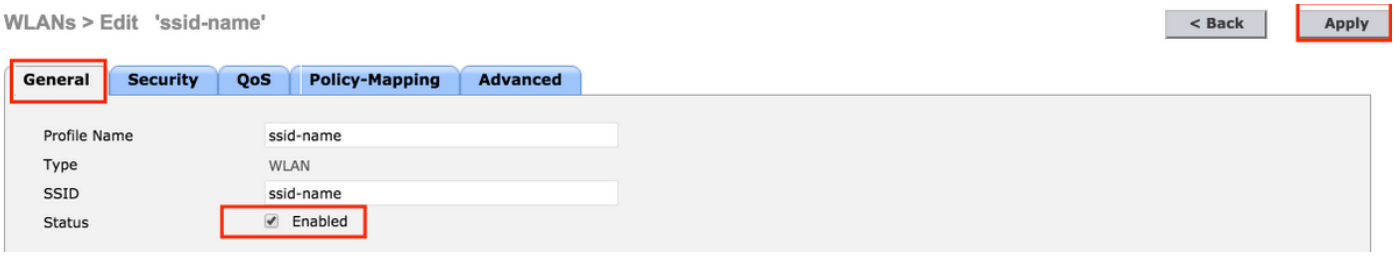


Étape 5. Activez le WLAN

CLI :

```
[root@tac-mxwireless ~]#mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB SERVERS IN PRODUCTION USE!
PLEASE READ EACH STEP CAREFULLY! In order to log into MariaDB to secure it, we'll need the
current password for the root user. If you've just installed MariaDB, and you haven't set the
root password yet, the password will be blank, so you should just press enter here. Enter
current password for root (enter for none): OK, successfully used password, moving on... Setting
the root password ensures that nobody can log into the MariaDB root user without the proper
authorisation. Set root password? [Y/n] Y New password: Re-enter new password: Password updated
successfully! Reloading privilege tables.. ... Success! By default, a MariaDB installation has
an anonymous user, allowing anyone to log into MariaDB without having to have a user account
created for them. This is intended only for testing, and to make the installation go a bit
smoother. You should remove them before moving into a production environment. Remove anonymous
users? [Y/n] y ... Success! Normally, root should only be allowed to connect from 'localhost'.
This ensures that someone cannot guess at the root password from the network. Disallow root
login remotely? [Y/n] y ... Success! By default, MariaDB comes with a database named 'test' that
anyone can access. This is also intended only for testing, and should be removed before moving
into a production environment. Remove test database and access to it? [Y/n] y - Dropping test
database... ... Success! - Removing privileges on test database... ... Success! Reloading the
privilege tables will ensure that all changes made so far will take effect immediately. Reload
privilege tables now? [Y/n] y ... Success! Cleaning up... All done! If you've completed all of
the above steps, your MariaDB installation should now be secure. Thanks for using MariaDB!
```

GUI :



Ajoutez les utilisateurs à la base de données de freeRADIUS

Par les clients par défaut utilisez les protocoles PEAP, toutefois support de freeRadius d'autres méthodes (non couvertes de ce guide).

Étape 1. Éditez le fichier */etc/raddb/users*.

```
[root@tac-mxwireless ~]#mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB SERVERS IN PRODUCTION USE!
PLEASE READ EACH STEP CAREFULLY! In order to log into MariaDB to secure it, we'll need the
current password for the root user. If you've just installed MariaDB, and you haven't set the
root password yet, the password will be blank, so you should just press enter here. Enter
current password for root (enter for none): OK, successfully used password, moving on... Setting
the root password ensures that nobody can log into the MariaDB root user without the proper
authorisation. Set root password? [Y/n] Y New password: Re-enter new password: Password updated
successfully! Reloading privilege tables.. ... Success! By default, a MariaDB installation has
an anonymous user, allowing anyone to log into MariaDB without having to have a user account
created for them. This is intended only for testing, and to make the installation go a bit
smoother. You should remove them before moving into a production environment. Remove anonymous
users? [Y/n] y ... Success! Normally, root should only be allowed to connect from 'localhost'.
This ensures that someone cannot guess at the root password from the network. Disallow root
login remotely? [Y/n] y ... Success! By default, MariaDB comes with a database named 'test' that
anyone can access. This is also intended only for testing, and should be removed before moving
into a production environment. Remove test database and access to it? [Y/n] y - Dropping test
database... ... Success! - Removing privileges on test database... ... Success! Reloading the
privilege tables will ensure that all changes made so far will take effect immediately. Reload
privilege tables now? [Y/n] y ... Success! Cleaning up... All done! If you've completed all of
the above steps, your MariaDB installation should now be secure. Thanks for using MariaDB!
```

Étape 2. Au bas du fichier ajoutez les informations d'utilisateurs. Dans cet exemple *user1* est le nom d'utilisateur et le *Cisco123 le* mot de passe.

```
[root@tac-mxwireless ~]#mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB SERVERS IN PRODUCTION USE!
PLEASE READ EACH STEP CAREFULLY! In order to log into MariaDB to secure it, we'll need the
current password for the root user. If you've just installed MariaDB, and you haven't set the
root password yet, the password will be blank, so you should just press enter here. Enter
current password for root (enter for none): OK, successfully used password, moving on... Setting
the root password ensures that nobody can log into the MariaDB root user without the proper
authorisation. Set root password? [Y/n] Y New password: Re-enter new password: Password updated
successfully! Reloading privilege tables.. ... Success! By default, a MariaDB installation has
an anonymous user, allowing anyone to log into MariaDB without having to have a user account
created for them. This is intended only for testing, and to make the installation go a bit
smoother. You should remove them before moving into a production environment. Remove anonymous
users? [Y/n] y ... Success! Normally, root should only be allowed to connect from 'localhost'.
This ensures that someone cannot guess at the root password from the network. Disallow root
```

```
login remotely? [Y/n] y ... Success! By default, MariaDB comes with a database named 'test' that
anyone can access. This is also intended only for testing, and should be removed before moving
into a production environment. Remove test database and access to it? [Y/n] y - Dropping test
database... ... Success! - Removing privileges on test database... ... Success! Reloading the
privilege tables will ensure that all changes made so far will take effect immediately. Reload
privilege tables now? [Y/n] y ... Success! Cleaning up... All done! If you've completed all of
the above steps, your MariaDB installation should now be secure. Thanks for using MariaDB!
```

Étape 3. Reprise FreeRadius.

```
[root@tac-mxwireless ~]#mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB SERVERS IN PRODUCTION USE!
PLEASE READ EACH STEP CAREFULLY! In order to log into MariaDB to secure it, we'll need the
current password for the root user. If you've just installed MariaDB, and you haven't set the
root password yet, the password will be blank, so you should just press enter here. Enter
current password for root (enter for none): OK, successfully used password, moving on... Setting
the root password ensures that nobody can log into the MariaDB root user without the proper
authorisation. Set root password? [Y/n] Y New password: Re-enter new password: Password updated
successfully! Reloading privilege tables.. ... Success! By default, a MariaDB installation has
an anonymous user, allowing anyone to log into MariaDB without having to have a user account
created for them. This is intended only for testing, and to make the installation go a bit
smoother. You should remove them before moving into a production environment. Remove anonymous
users? [Y/n] y ... Success! Normally, root should only be allowed to connect from 'localhost'.
This ensures that someone cannot guess at the root password from the network. Disallow root
login remotely? [Y/n] y ... Success! By default, MariaDB comes with a database named 'test' that
anyone can access. This is also intended only for testing, and should be removed before moving
into a production environment. Remove test database and access to it? [Y/n] y - Dropping test
database... ... Success! - Removing privileges on test database... ... Success! Reloading the
privilege tables will ensure that all changes made so far will take effect immediately. Reload
privilege tables now? [Y/n] y ... Success! Cleaning up... All done! If you've completed all of
the above steps, your MariaDB installation should now be secure. Thanks for using MariaDB!
```

Certificats sur le freeRADIUS

FreeRADIUS est livré avec un certificat du par défaut CA (certification Authoritiy) et un certificat de périphérique qui sont enregistrés dans le chemin */etc/raddb/certs.* Le nom de ces Certificats sont *ca.pem et* server.pem *server.pemis le certificat* que les clients recevront tandis qu'ils passent par la procédure d'authentification. Si vous devez assigner un certificat différent pour l'authentification EAP vous pouvez simplement les supprimer et sauvegarder les neufs dans le même chemin avec ce précis le même nom.

Configuration de périphérique d'extrémité

Configurez un ordinateur de Windows d'ordinateur portable pour se connecter à un SSID avec l'authentification de 802.1x et la version 2 PEAP/MS-CHAP (version de Microsoft de l'authentification Protocol à échanges confirmés).

Pour créer le profil WLAN sur l'ordinateur de fenêtres là soyez deux options :

1. Installez le certificat auto-signé sur l'ordinateur pour valider et faire confiance au serveur de freeRADIUS afin de se terminer l'authentification
2. Sautez la validation du serveur de RAYON et faites confiance à n'importe quel serveur de RAYON utilisé pour exécuter l'authentification (non recommandée, comme ce peut devenir un problème de sécurité). La configuration pour ces options sont expliquées sur la configuration de périphérique d'extrémité - créez le profil WLAN - étape xx.

Configuration de périphérique d'extrémité - Certificat de freeRADIUS d'importation

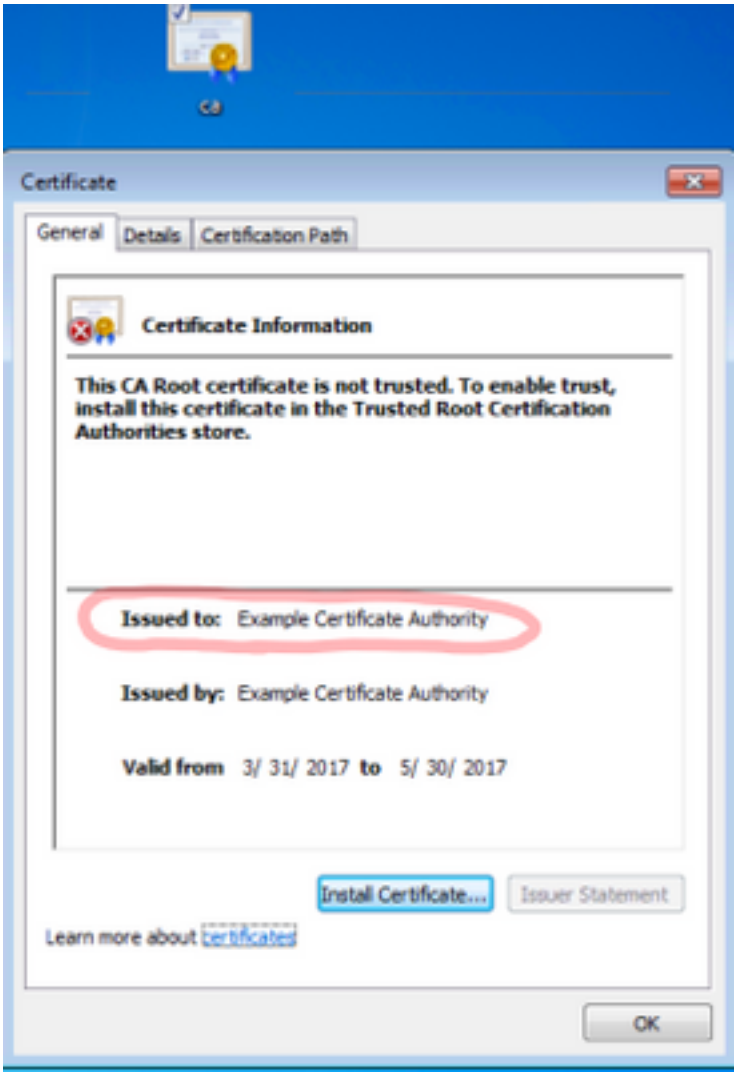
Si vous utilisez les Certificats par défaut installés sur le freeRADIUS, suivez ces étapes afin d'importer le certificat d'EAP du serveur de freeRADIUS dans le périphérique d'extrémité.

Étape 1. Obtenez le CERT de FreeRadius :

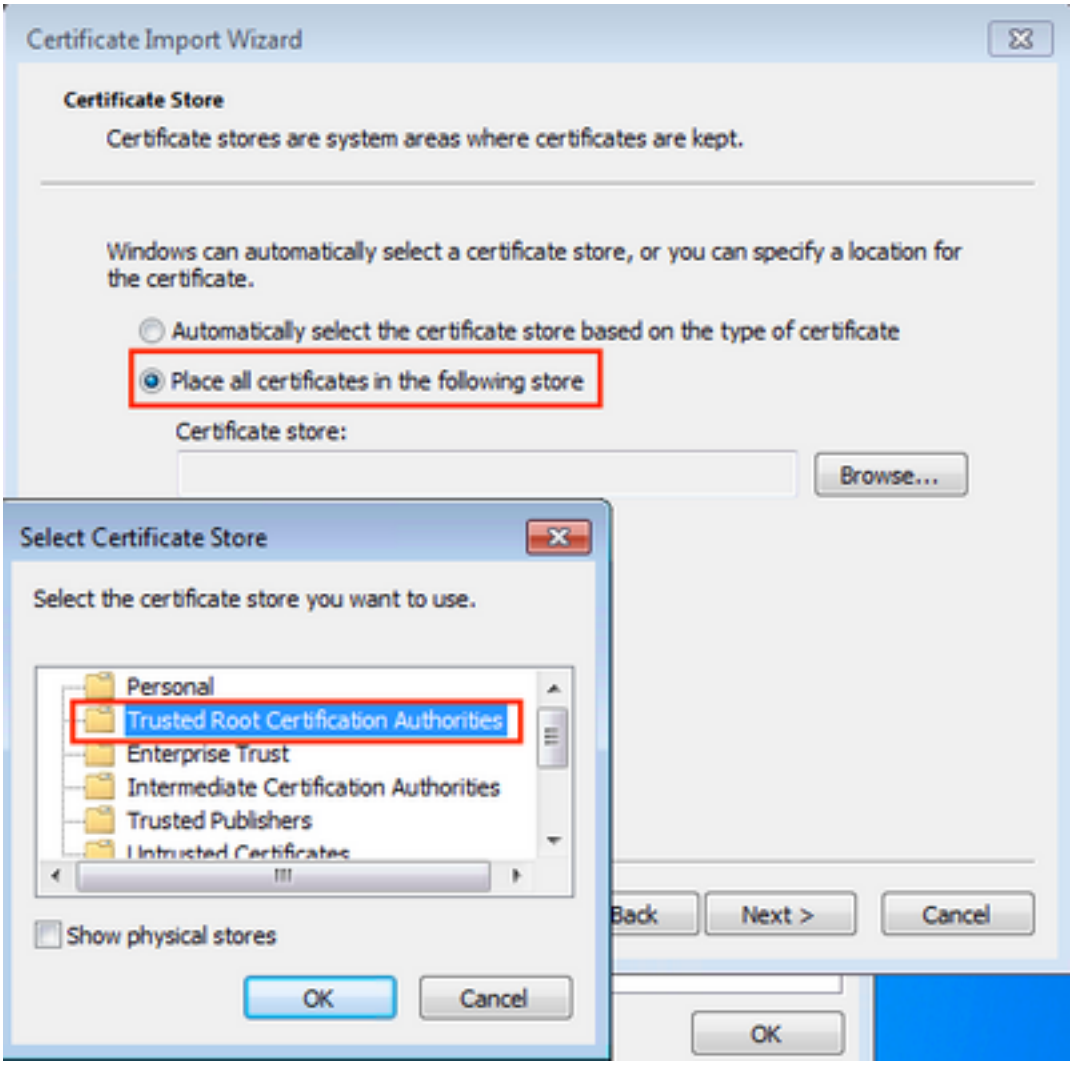
```
[root@tac-mxwireless ~]#mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB SERVERS IN PRODUCTION USE!
PLEASE READ EACH STEP CAREFULLY! In order to log into MariaDB to secure it, we'll need the
current password for the root user. If you've just installed MariaDB, and you haven't set the
root password yet, the password will be blank, so you should just press enter here. Enter
current password for root (enter for none): OK, successfully used password, moving on... Setting
the root password ensures that nobody can log into the MariaDB root user without the proper
authorisation. Set root password? [Y/n] Y New password: Re-enter new password: Password updated
successfully! Reloading privilege tables.. ... Success! By default, a MariaDB installation has
an anonymous user, allowing anyone to log into MariaDB without having to have a user account
created for them. This is intended only for testing, and to make the installation go a bit
smoother. You should remove them before moving into a production environment. Remove anonymous
users? [Y/n] y ... Success! Normally, root should only be allowed to connect from 'localhost'.
This ensures that someone cannot guess at the root password from the network. Disallow root
login remotely? [Y/n] y ... Success! By default, MariaDB comes with a database named 'test' that
anyone can access. This is also intended only for testing, and should be removed before moving
into a production environment. Remove test database and access to it? [Y/n] y - Dropping test
database... ... Success! - Removing privileges on test database... ... Success! Reloading the
privilege tables will ensure that all changes made so far will take effect immediately. Reload
privilege tables now? [Y/n] y ... Success! Cleaning up... All done! If you've completed all of
the above steps, your MariaDB installation should now be secure. Thanks for using MariaDB!
```

Étape 2. Copiez et collez la sortie de l'étape précédente dans un fichier texte et changez l'extension à .crt

Étape 3. Double-cliquer le fichier et choisi **installez le certificat...**

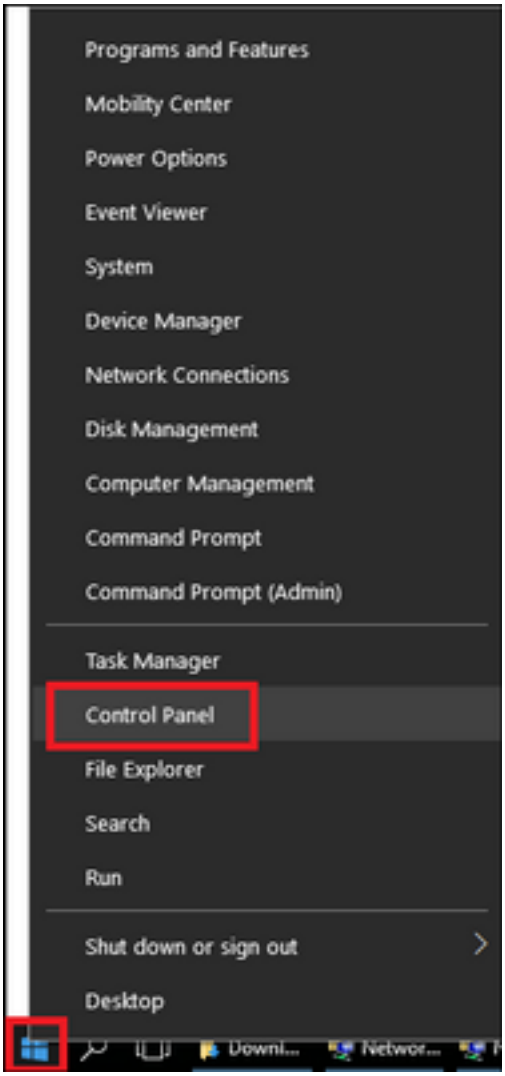


Étape 4. Installez le certificat dans la mémoire d'**Autorités de certification racine approuvée**.

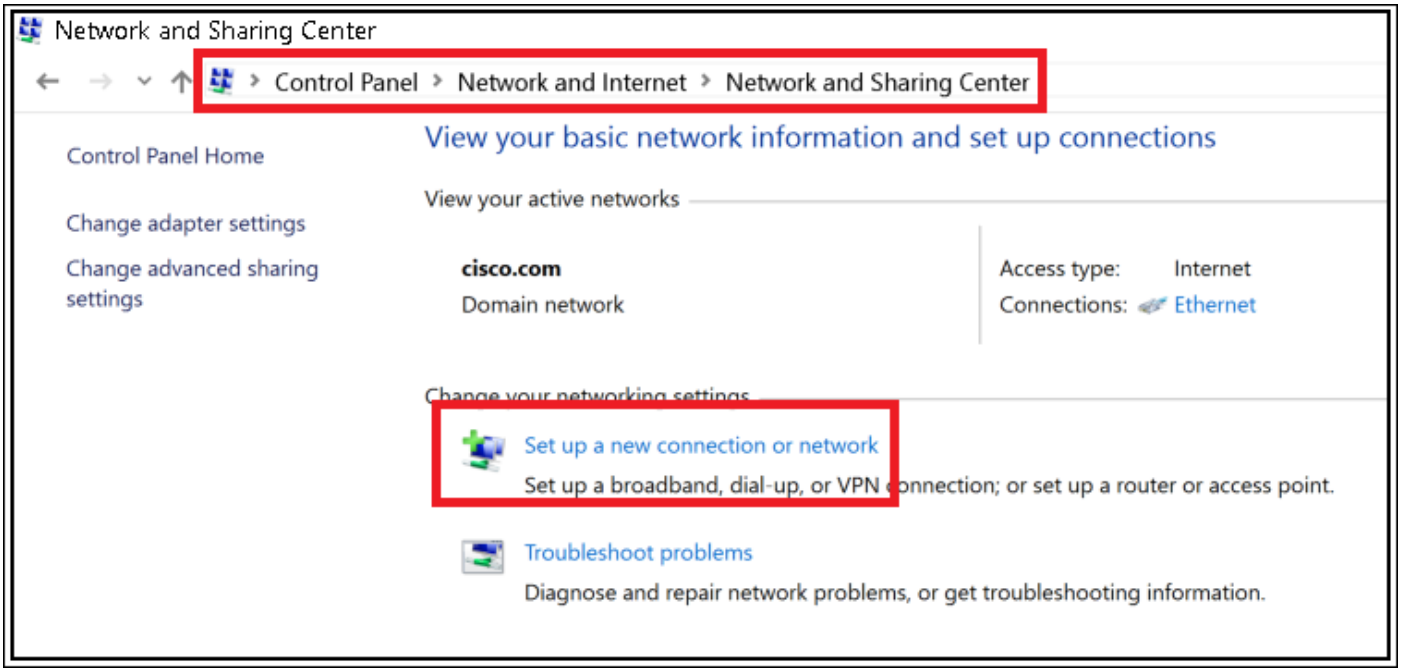


Configuration de périphérique d'extrémité - Créez le profil WLAN

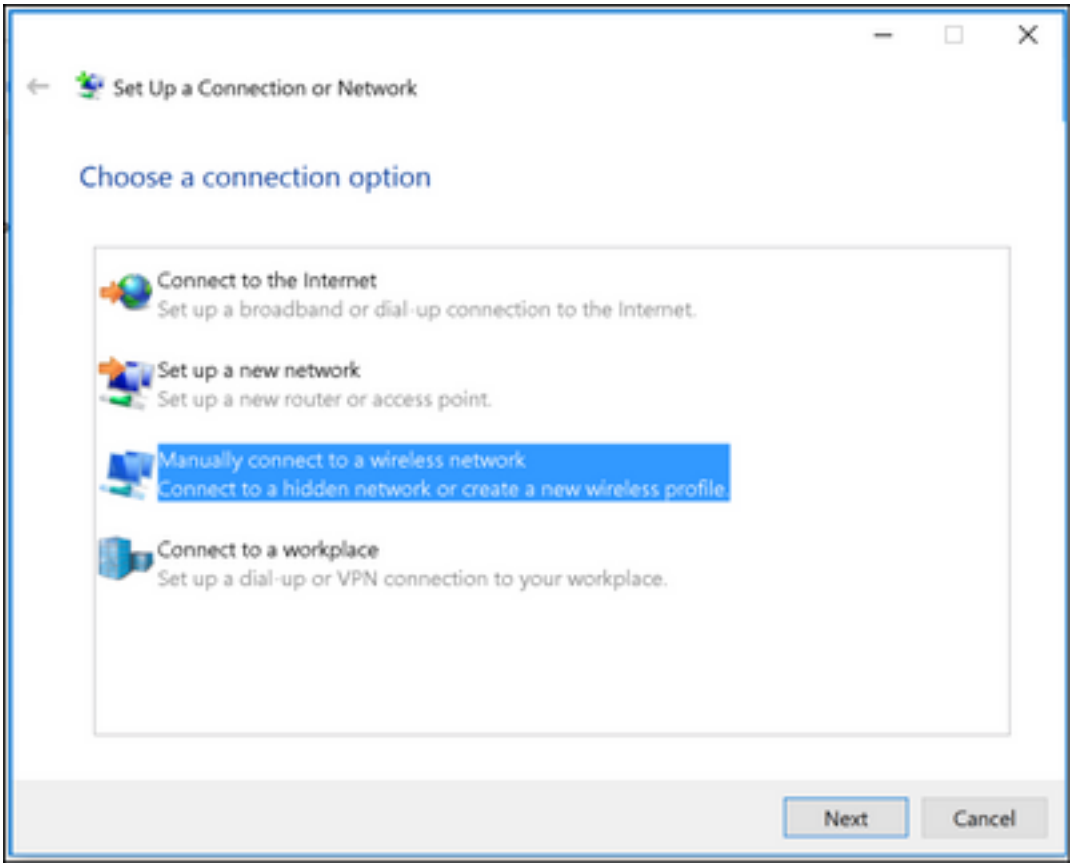
Étape 1. Clic droit sur l'icône de début et le **panneau de configuration** choisi.



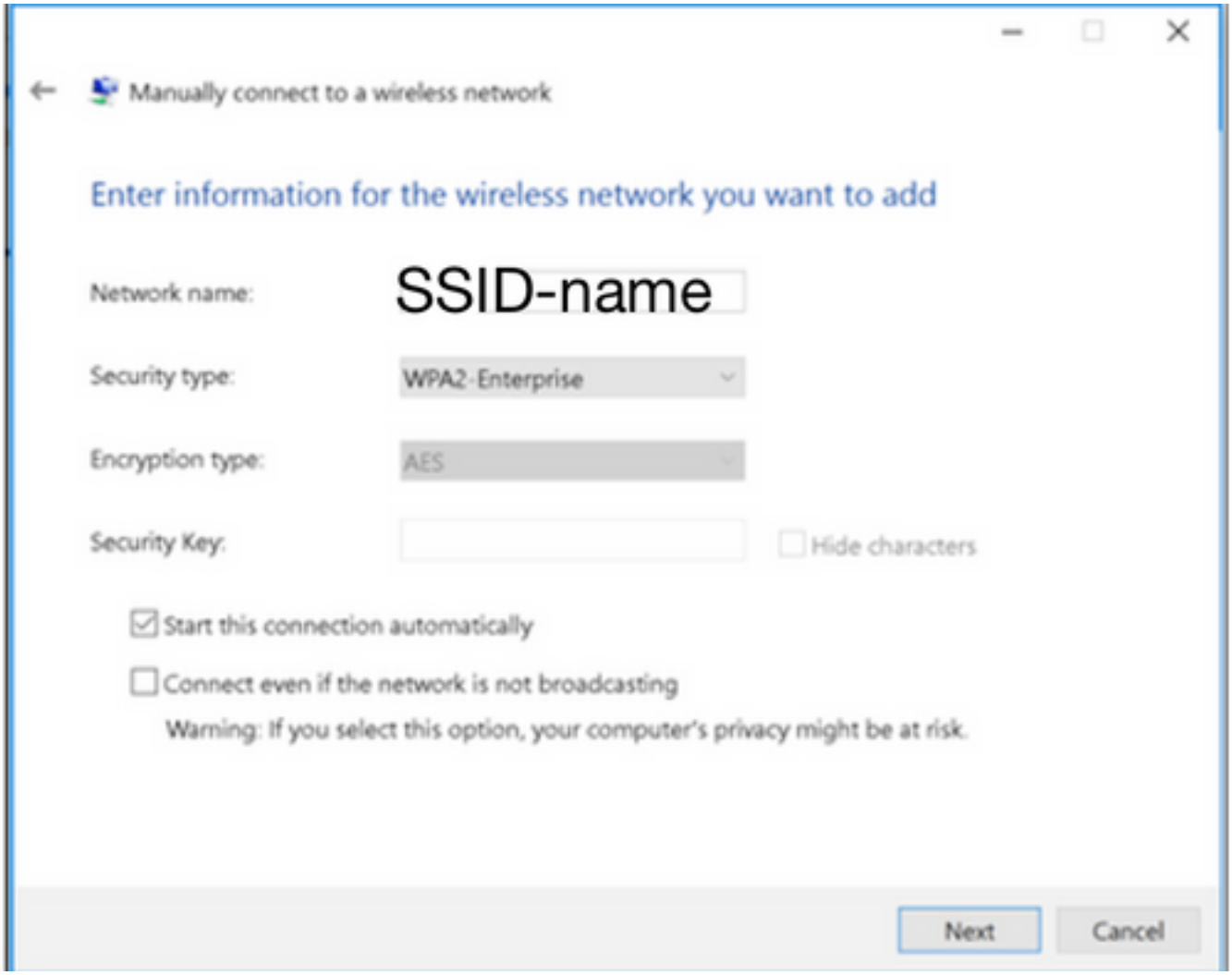
Étape 2. Naviguez vers le **réseau et l'Internet**, ensuite cela naviguent vers le **réseau et partager centraux** et cliquent sur **a en fonction installé une nouvelle connexion ou réseau.**



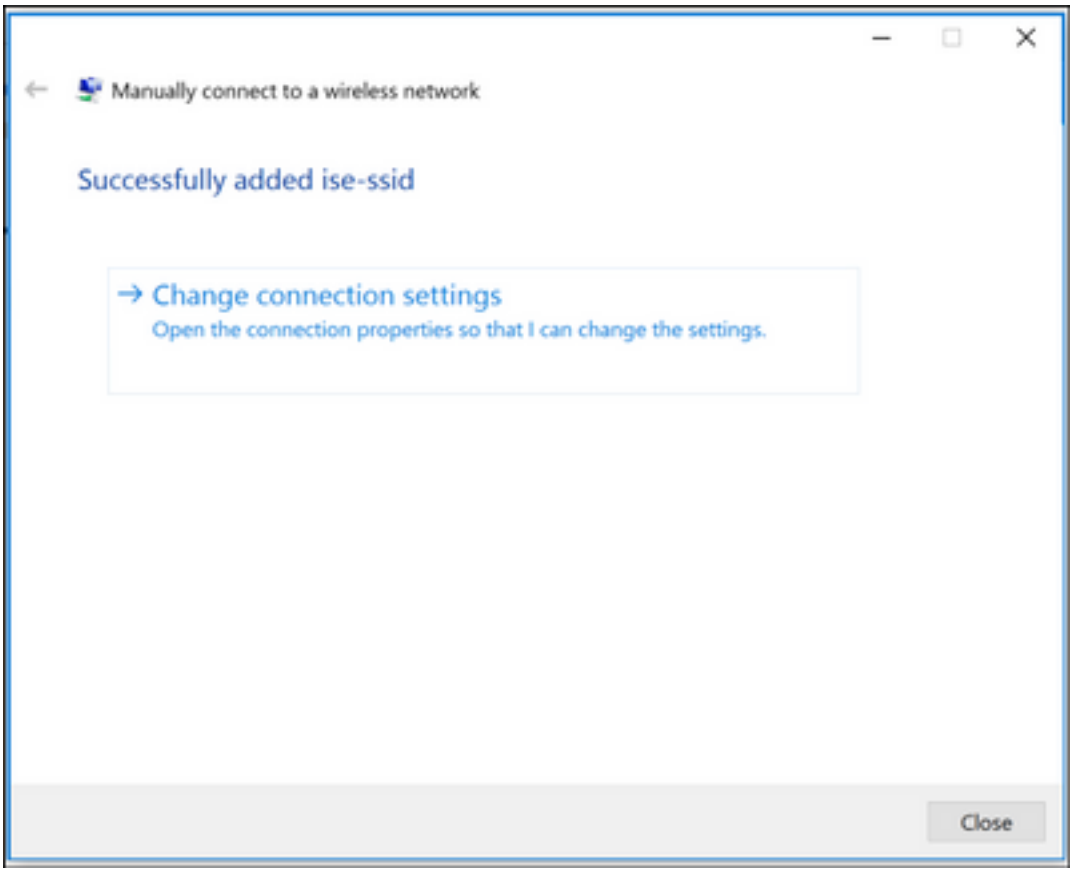
Étape 3. Sélectionnez **se connectent manuellement à un réseau Sans fil** et cliquent sur Next.



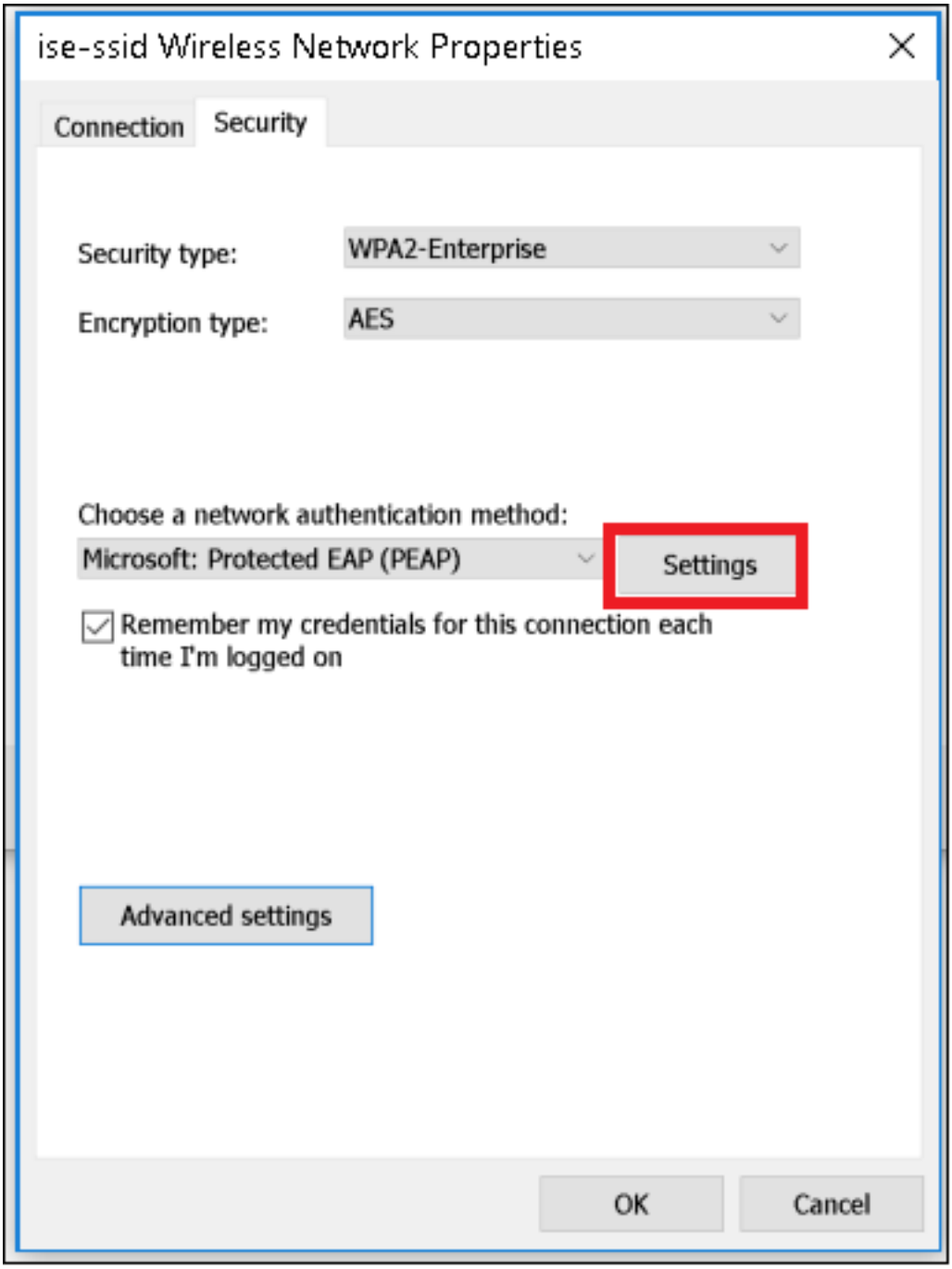
Étape 4. Écrivez les informations avec le nom du WPA2 Enterprise de type SSID et de Sécurité et cliquez sur Next.



Étape 5. Sélectionnez les **paramètres de connexion de modification** afin de personnaliser la configuration du profil WLAN.



Étape 6. Naviguez vers l'**onglet Sécurité** et cliquez sur les **configurations.**



Étape 7. Choisissez si le serveur de RAYON est validé ou pas.

Si oui, l'enable **vérifient l'identité du serveur en validant le certificat** et des **Autorités de certification racine approuvée :** la liste sélectionnent le certificat auto-signé du freeRADIUS.

Ensuite ce choisi **configure** et désactive **automatiquement l'utilisation mon nom de connexion et mot de passe de Windows…**, puis clique sur OK