GreenRocket Security

Migration to GreenRADIUS from YubiRADIUS

Introduction

GreenRADIUS - Yubico Edition is the next generation YubiRADIUS developed by the same team that once developed YubiRADIUS.

Based on YubiRADIUS stability many organizations are still using YubiRADIUS in production even though latest updates to the server are from early 2013. However, since latest updated, many treats needing patching and major upgrades have been discovered.

A new even more robust server, GreenRADIUS – Yubico Edition, was created from the ground-up, having the same popular core features as YubiRADIUS but is fully updated to thwart the latest treats.

This step by step guide helps you through the migration from YubiRADIUS to the GreenRADIUS.

Migration in general

In general migrating requires planning and following the step by step instructions below. The full migration process is estimated to take between 15-45 minutes for a Linux administrator to perform from start to end.

Please note that migration to GreenRADIUS can only be made from YubiRADIUS 3.6.x because many things changed from prior versions and would create too many variable to take into consideration. So if you want to migrate from previous YubiRADIUS versions, please use existing upgrade scripts from Yubico to upgrade your installation until you have upgraded to version 3.6.x (any 3.6 version will do).

If you feel you have a different situation or want more guidance we can still help you as we are offering migration as a paid service. Contact us to discuss your needs.

Migration to GreenRADIUS from YubiRADIUS (version 3.6.x)

Singe server migration is described below. Multi server migration requires the same steps to be followed for each server instance (further described below).

Single server without YubiHSM

Migrating a single server is quite easy. Follow the process listed below.

Prerequisites

- Download the latest GreenRADIUS Server Version from www.greenrocketsecurity.com and power-on the Virtual Appliance instance and configure a static network address, network mask, default gateway and DNS server
- The following instructions assume you have setup a fresh instance of the GreenRADIUS Server and there is no other configuration done except for the network settings mentioned in the previous step.
- Before starting the actual migration, we highly recommend you stop forwarding any RADIUS authentication requests to the YubiRADIUS server so the data integrity is maintained.

Steps to be performed on the YubiRADIUS Server (3.6.1) instance

1. First, we need to make a backup of the following databases from the YubiRADIUS server:

   a. Ykval

   b. ykrop2

   c. ykmap

   d. ykksm

   The details are explained in the following steps.

2. Login to YubiRADIUS as user "root" using free "Putty" application (or using any other ssh client program or do a console login) and create a folder named "migration" under "/tmp" by running the following command:
   mkdir /tmp/migration

3. Backup the databases using the following commands (highlighted in bold text):

   - For "ykval" database:
     sudo -u postgres pg_dump -T "queue" -a ykval > /tmp/migration/ykval.sql

   - For "ykrop2" database:
     sudo -u postgres pg_dump -T "reports" -T "authentication_logs" -T "sys_settings" -a ykrop2 > /tmp/migration/ykrop2.sql

   - For "ykksm" database:
     sudo -u postgres pg_dump -T "queue" -a ykksm > /tmp/migration/ykksm.sql

   - For "ykmap" database:
     sudo -u postgres pg_dump -T "queue" -a ykmap > /tmp/migration/ykmap.sql

4. Create a tar ball (tar-file) of the .sql files created in step 3 using the following commands:
   - Switch to the "migration" directory created in "/tmp" directory:
     cd /tmp/migration

   - Create a tar ball by running the following command:
     tar cvzpf migrationDb.tgz ykksm.sql ykrop2.sql ykval.sql ykmap.sql

5. Next step is to create a separate tar ball of various configuration files from YubiRADIUS using the following command:

   - Switch to the "migration" directory created in "/tmp" directory:

cd /tmp/migration

- Create a tar ball of required configuration files:

  tar cvzpf migrationConf.tgz /etc/freeradius/clients.conf /etc/freeradius/radiusd.conf /etc/ykropval/ykropval-config.php /etc/ykropval/ykropval-config.php-template /etc/ykropval/ykropval-config.php-template~ /etc/ykmap/ykmap-config.php /etc/ykmap/ykmap-config.php~ /etc/ykmap/ykmap-config.php-template /etc/ykmap/ykmap-config.php-template~ /etc/ykval/ykval-config.php /etc/ykval/ykval-config.php~ /etc/ykval/ykval-config.php-template /etc/ykval/ykval-config.php-template~ /etc/ykksm/ykksm-config.php /etc/ykksm/ykksm-config.php~

At the end of Step 5, you should have two .tgz files in your /tmp/migration directory. Transfer the tar balls (migrationConf.tgz and migrationDb.tgz files) to the new GreenRADIUS "/tmp" folder using the following command:

    scp migrationDb.tgz migrationConf.tgz root@<<<<IP address or hostname of the GreenRADIUS instance>>>>:/tmp/

Steps to be performed on the GreenRADIUS Server instance

1. Run the following commands for postgres database on the GreenRADIUS server:
   - **sudo -u postgres psql ykrop2 -c "DELETE FROM globalconf"**
   - **sudo -u postgres psql ykrop2 -c "DELETE FROM radiusclients"**
   - **sudo -u postgres psql ykval -c "DELETE FROM clients"**

2. Goto the "/tmp" directory using following command:
   - **cd /tmp**

3. Check the tar balls (copied from the YubiRADIUS 3.6.x server) are present in "/tmp" directory using:
   - **ls -l**

4. Untar the tar balls (migrationConf.tgz and migrationDb.tgz files) using the following commands:

   - Untar the tar ball of configuration files by running the following command:
     tar -xvzpf migrationConf.tgz -C /

   - Untar the tar ball of .sql files (database backup files) by running the following command:
     tar -xvzpf migrationDb.tgz

5. After successfully extracting files from the tar balls, from the same "/tmp" directory run the following commands for database update:

- **sudo -u postgres psql ykrop2 < ykrop2.sql**
- **sudo -u postgres psql ykksm < ykksm.sql**
- **sudo -u postgres psql ykval < ykval.sql**
- **sudo -u postgres psql ykmap < ykmap.sql**

6. Reboot the GreenRADIUS Server instance and login to the Webmin console and verify that your configuration, users etc. are migrated to the GreenRADIUS Server. Once verified, the GreenRADIUS Server is ready to process RADIUS requests and at this point you need to update your Remote Access equipment configuration to send its RADIUS authentication requests to the new GreenRADIUS Server address instead of YubiRADIUS Server address.

Multiple servers without YubiHSM

In this scenario, you need to create a new GreenRADIUS Server instance per YubiRADIUS 3.6.x Server instance configured for synchronization and perform the exact same steps as listed above on each pair of YubiRADIUS 3.6.x Server instance and corresponding GreenRADIUS Server instance.

Need more help?

The steps above are the complete steps but as mentioned briefly above, if you would like help, Migrating is also offered as a paid service. Contact Green Rocket Security for more info.

Appendix

Migrating when using YubiHSM

When using YubiHSM the keys are stored encrypted in the database and it is very important how to handle this situation, especially for multi-server environment with YubiHSMs. Contact Green Rocket Security for more info regarding services to perform this type of upgrade.

Single Server with YubiHSM

Migrating a single server with YubiHSM is quite easy but in order to make sure you have a working YubiHSM server at the end of your migration please contact Green Rocket Security.

Multiple Servers with YubiHSM

Migrating several serves with YubiHSMs requires minute detailed planning. Contact Green Rocket Security for more info regarding services to perform this type of upgrade.