

# **RFM**

**Router Fleet Manager** 

**SETUP GUIDE** 

RFM product family is manufactured by

# **ETIC TELECOM**

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In case of difficulty in implementing the product, you can contact your reseller, or contact our support service:

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# **PRESENTATION**

## 1 Aim of the document

This document describes how to configure the products of the RFM family manufactured by ETIC TELECOM.

It is applicable from software version 1.1.0.

## 2 Main characteristics of the RFM family

RFM products allows a fleet of RAS routers to be configured remotely.

Main characteristics:

- · Available in 220v table box
- · Compatible with all our range of routers
- · Management of a list of users and user groups
- · Ephemeral users
- Fine configuration of access rights to each site or equipment
- · Definition of a password policy
- · Configuration & diagnostics via an html server
- · Automatic configuration saving

# PREPARE CONFIGURATION

## 1 PC connection for configuration

#### 1.1 Introduction

The RFM is configured using a PC equipped with a web browser. No additional software is required. The RFM is a router on which is installed a management system for a fleet of routers. It therefore has an HTML configuration interface for the network part (administration server) identical to that of our range of routers as well as a configuration interface dedicated to fleet management (fleet management server).

Each configuration interface has a configuration file as well as its own configuration backup system.

#### **Administration server Address:**

On delivery, URL for accessing the administration web server is <a href="http://192.168.0.128:8080">http://192.168.0.128:8080</a>

#### **RAS Fleet Management Server Address:**

On delivery, URL for accessing the administration web server is <a href="https://192.168.0.128:443">https://192.168.0.128:443</a> The default identifiers of the RFM interface are:

User: etic

Password: etictelecom

#### **Configuration:**

The first configuration is preferably done by connecting the PC directly to the Ethernet LAN connector. Subsequent modifications can additionally be carried out remotely.

#### Restoration of the factory IP address:

The factory IP address 192.168.0.128 can be restored by pressing the push button on the back of the product.

#### Access protection to the administration server:

If you cannot access the administration server, access has probably been restricted for security or other reasons.

#### Network address format:

In the remainder of the text, we call "network address" the lowest value IP address of the network. For example, if the netmask is 255.255.255.0, the network address is X.Y.Z.0.

#### 1.2 First configuration

#### Step 1: Create or modify the TCP / IP connection of the PC

Assign the PC a different IP address that is consistent with the factory IP address of the RFM; for example, the address 192.168.0.1 for the PC.

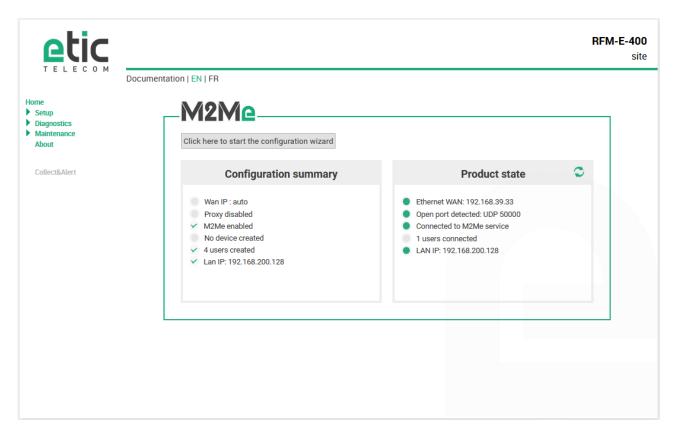
#### Step 2: Connect the PC to the RFM

Connect the PC directly to the RFM using a straight or crossover Ethernet cable.

#### Step 3: Launch the browser

Start the browser and enter the URL of the RFM administration server: http://192.168.0.128

The administration server home page is displayed.



**Note:** When configured for the first time, access to the administration server is not protected. It is strongly recommended that you **protect access to the configuration interface.** 

#### 1.3 Subsequent modification of the configuration

Subsequently, the RFM administration server can be accessed from the Ethernet interface at the IP address assigned to the product.

- Open the html browser and enter the URL for accessing the RFM administration server.
- Enter the username and password, if applicable, programmed to protect access to the administration server.

## 2 Return temporary to factory configuration

If the IP address of the RFM cannot be identified, or if it is impossible to access the administration server following a configuration error, it is possible to restore the Factory configuration without losing the current configuration.

- Keep the push-button pressed for about 3 seconds.
- The indicator light flashes red rapidly.
- The administration server becomes accessible at the Factory IP address (192.168.0.128), in HTTP and without authentication. The configuration temporarily applied is the Factory configuration. <u>However, the current configuration is not lost</u> and is the one that is still visible in the pages of the administration server.
- After reading the IP address or changing parameters of the displayed configuration, press the push-button again or switch the product off and then on again.
- The product becomes reachable again at the registered IP address.

#### Note:

If the RFM's IP address is not known, the EticFinder software can also be used.

This software detects all ETIC brand products on a local network. After launching the software, click on the "Search" button, then, when the list of products is displayed, double-click on the product address to access its html server.

## 3 Return to factory configuration

#### To restore the Factory configuration using the push button,

- Switch off the RFM.
- Press the push button located at the rear of the box.
- Switch on while keeping the push button pressed.

The indicator light turns red; RFM is initialized and the Factory configuration is restored.

Note: You can also restore the Factory configuration from **Maintenance > Configurations management** of the administration server.

#### 4 Protect access to the configuration interface

- Select > Setup > Security > Administration rights.
- Enter the username and password that protect access to the administration server.
- Click on Password protect the configuration interface.
- In the field Protocols to use for configuration Select HTTPs only.

If you lost the administration interface credentials, you must temporarily return to the factory configuration. You can therefore change the password. Restart the router to apply the modified configuration.

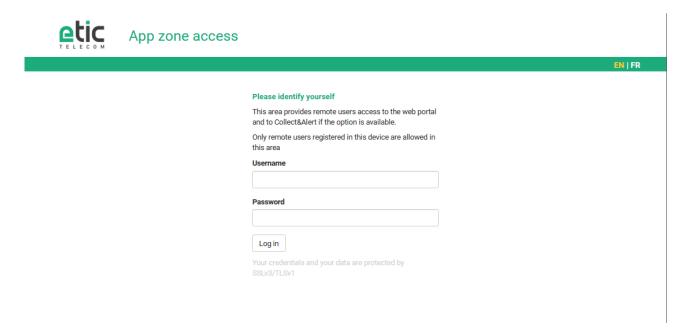
It is possible to disable the push button allowing return to factory configuration by checking **Disable the pushbuttons** in the > **Setup > Security > Administration rights** page.

# 5 Access to the fleet configuration interface

Access to the fleet configuration interface is also via a WEB browser.

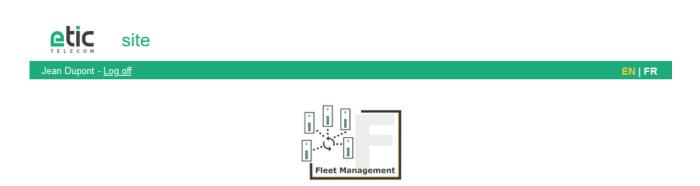
Launch the browser then enter the URL to access the fleet management interface: https://192.168.0.128:443

The operating server login page is displayed.



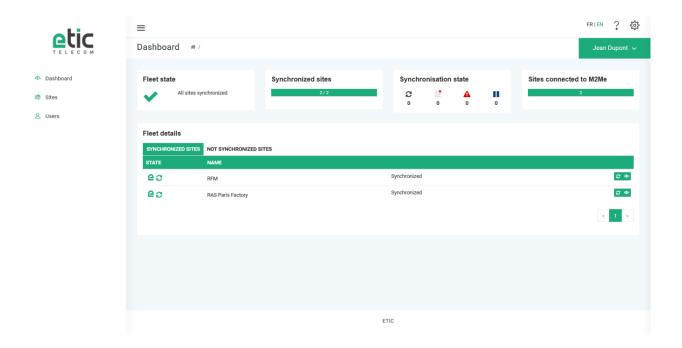
Enter the identifiers of a fleet user with administration rights (default user: etic / password: etictelecom). The operating server home page is displayed.

To secure access to the fleet management interface, refer to the section <u>Secure access to the fleet management interface.</u>



Click on the Fleet Management button.

The fleet management system home page is displayed.



# 6 Configuration steps

To configure the product, we recommend proceeding as follows:

- 1. Router settings
  - Connect to the administration interface
  - Configure the Internet connection
  - Configure the connection to the M2Me service
- 2. Fleet configuration
  - Connect to the fleet management interface
  - Add sites to the fleet
  - Add users / user groups and their access rights

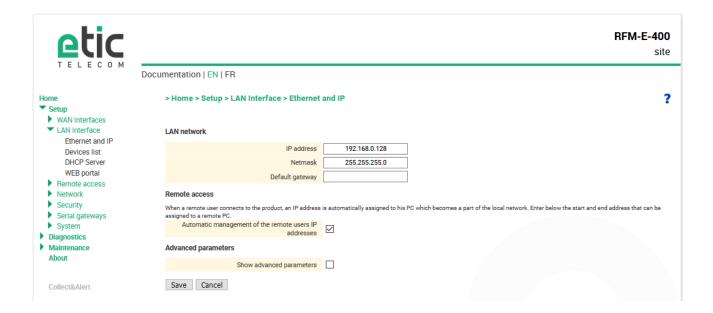
# **ROUTER CONFIGURATION**

The routing functions are configured through the administration interface of the router.

The advanced routing functions are described in the configuration manual of our routers.

## Configure the LAN IP address

In the menu, select Setup > LAN Interface > Ethernet and IP



· Configure the LAN network parameters:

#### **IP Address**

This is the IP address assigned to the Ethernet interface of the RFM on the local network.

This is the IP address of the administration server.

Default: 192.168.0.128

#### **Subnet mask**

The subnet mask defines the structure of the IP addresses of all stations in an Ethernet segment of the local network.

Default value: 255.255.255.0

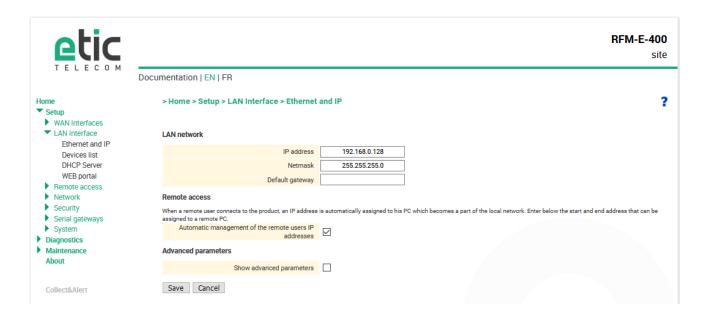
#### **Default Gateway**

This is the default router IP address on the local network. This gateway is only active when no WAN is connected.

## 2 Configure the Internet connection

#### 2.1 Access via the LAN interface

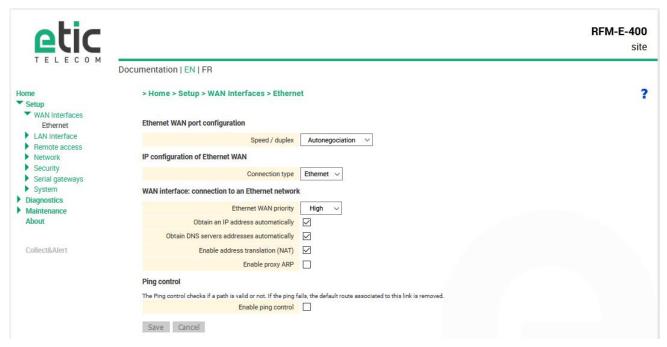
In the menu, select Setup > LAN Interface > Ethernet and IP



Fill the field **Default gateway** with the IP address of the Internet access router.

#### 2.2 Access via the Ethernet WAN interface

In the menu, select Setup > WAN Interfaces > Ethernet



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#### **IP Address**

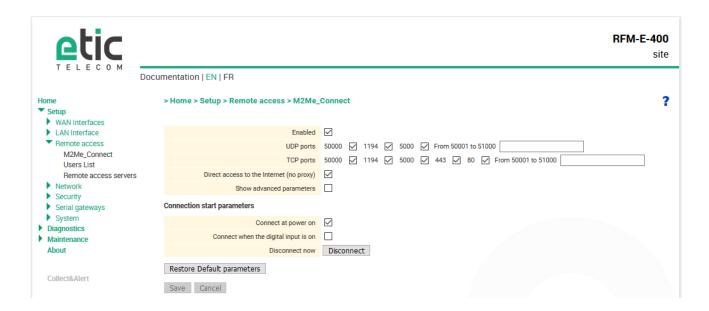
This is the IP address assigned to the RFM Ethernet interface on the local network.

This is the IP address of the administration server.

Default: 192.168.0.128

## 3 Configure the connection to the M2Me service

• In the menu, select Setup > Remote access > M2Me\_Connect



Check the **Enabled** box.

Select the UDP / TCP ports you want to use to connect to the M2Me service.

# **FLEET CONFIGURATION**

#### 1 Operating principle

#### 1.1 General principles

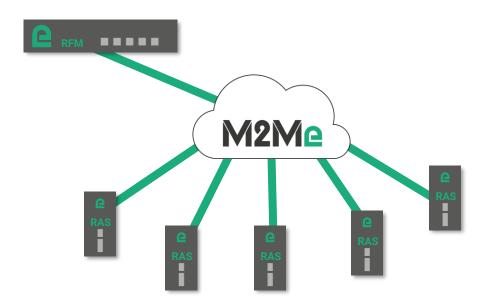


Diagram 1: How the solution works

RFM is a product for centralizing the configuration of a RAS fleet through M2Me. The RFM is compatible with the entire RAS range from Etic Telecom.

The RFM has a graphical interface allowing the configuration of fleet parameters.

#### 1.2 Synchronization modes

To configure a RAS, the RFM uses the RAS configuration http API. He therefore needs to know the credentials of the RAS administrator.

For the RFM to be able to access this HTTP API for configuring the RAS, 2 scenarios arise:

- 1 RFM establishes a user connection to the RAS. It is therefore found in the RAS LAN network and can therefore access to the http configuration interface. In this case, it is necessary to enter the identifiers of a remote RAS user in the RFM.
- 2 The RAS has opened its HTTPs configuration interface in the M2Me service (see diagram 2 below). In this case, the administrator's credentials are sufficient for the RFM to do the remote configuration.

## 1.3 Sites and groups of sites

A site is a RAS product identified by its product key. To classify the sites, it is possible to group them.

#### 1.4 Users and user groups

A user is a natural person identified by an identifier / password pair. It is possible to group users to apply access rights more globally. In fact, when a user is added to a group, he directly inherits the access rights defined for the group.

## 1.5 Pairing / synchronization

When a site is configured, the RFM performs a connection called pairing to verify the connection credentials entered during site configuration and retrieve the list of machines on the RAS. During pairing, no action is taken in the configuration of the remote RAS. It is therefore always possible to log in with the user identifiers created locally in the RAS.

When the administrator puts the site in synchronization mode ( button), the RFM connects to the RAS to write the new list of users and their access rights. It is therefore no longer possible to connect to the RAS with the user identifiers created locally in the configuration of the RAS.

## 2 Secure access to the fleet management interface

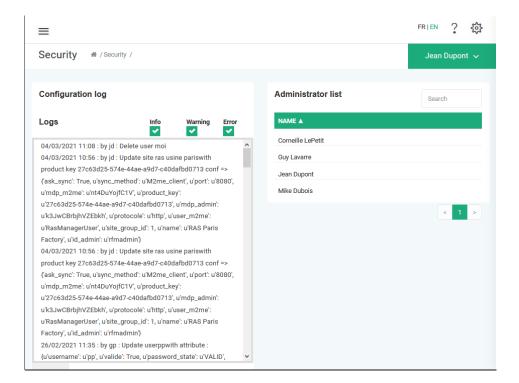
By default, the connection to the fleet management page is secured in HTTPs. From the first connection, it is recommended to create at least one fleet administrator.

To create a fleet administrator, you must create a user and check the box Ras manager administrator at the end of the form.



Once you have created one or more administrators, you must delete the default user.

You can get the list of RFM administrators in the menu Settings > Security dashboard.



# 3 Add a site to the fleet

This paragraph describes the steps to add a site to the fleet.

## 3.1 Configuration steps.

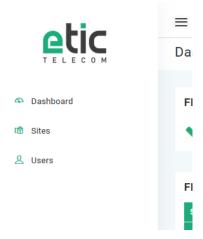
Step 1: Create a site

Step 2: Activate synchronization

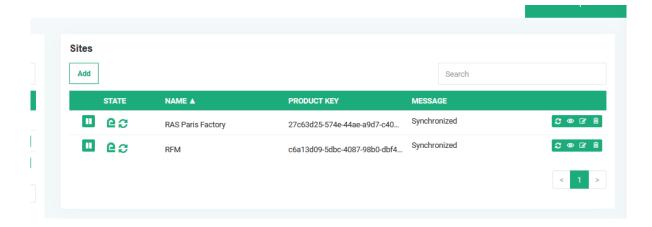
Step 3: Check the site

## 3.2 Step 1: Create a site

In the left menu select the menu Sites

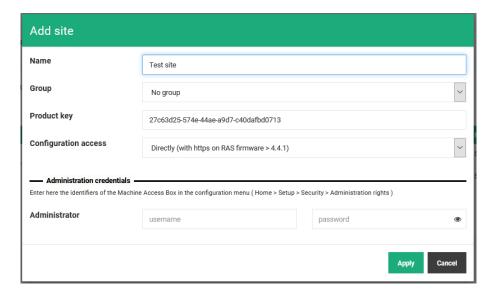


In the Sites frame click on Add



#### ROUTER CONFIGURATION

#### A dialog box opens:



Choose a site name then enter the product key.

Once the product key has been entered, if the site's RAS is connected to the M2Me service, the RFM analyses the equipment and adapts the rest of the form according to the configuration mode available on the RAS (see <a href="Synchronization modes">Synchronization modes</a>).

Note: The product key is available in the menu Setup > About of the RAS.

Two scenarios:

- 1 The RAS has opened its administration interface on M2Me (For more reactivity in the synchronization process, it is advisable to configure the RAS in such a way as to use this mode cf. Open the administration interface of the RAS on M2Me)
  - Choose Access to configuration Direct
  - Enter the credentials of the RAS configuration administrator.
- 2 The RAS has not opened access to its administration interface on the M2Me service.
  - Choose Access to configuration Via a remote connection
  - Enter the credentials of a remote RAS user.
  - Enter the credentials of the RAS configuration administrator.

#### 3.3 Step 2: Activate synchronization

Once the site is added, RFM performs <u>a pairing</u> to verify the login credentials. By default, the site is paused; That is to say, it performs a pairing to the site to check its availability as well as the login credentials but does <u>not synchronize</u> the list of users.

To activate synchronization, you must click on the button on the line of the site.

#### 3.4 Step 3: Check the site

The site status is shown in the left column of the sites table. The right column indicates the status of the site in text.

## **ROUTER CONFIGURATION**



Once pairing is complete, activate synchronization. Please note that synchronization overwrites the list of RAS users and replaces it with the one defined by the access rights entered in the RFM.



Once synchronization is complete, you can test the remote connection to your RAS with your M2Me client (see M2Me client configuration).

## 3.5 Open the RAS administration interface on M2Me (recommended)

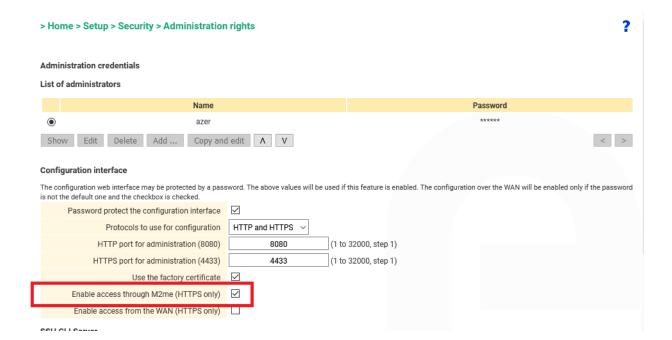
To simplify the synchronization of the RAS with the RFM, it is possible to open the RAS administration interface on M2Me. When this interface is open to the M2Me service, the RFM no longer needs to establish a user connection to the RAS to perform its maintenance operation.

Activating this mode allows:

- Improved fleet synchronization speed
- Simplification of site configuration

For security reasons the mode is not enabled by default in the RAS configuration.

To activate it, check the box Enable access by M2Me (HTTPs only) in the menu Setup > Security > Administration rights.

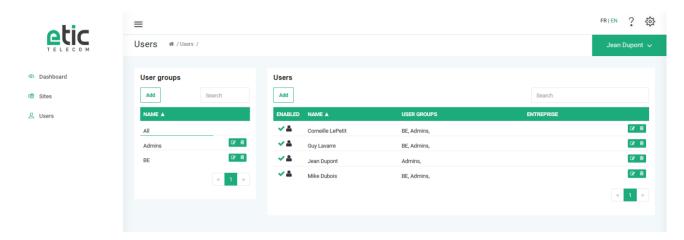


# 4 Add a user to the fleet

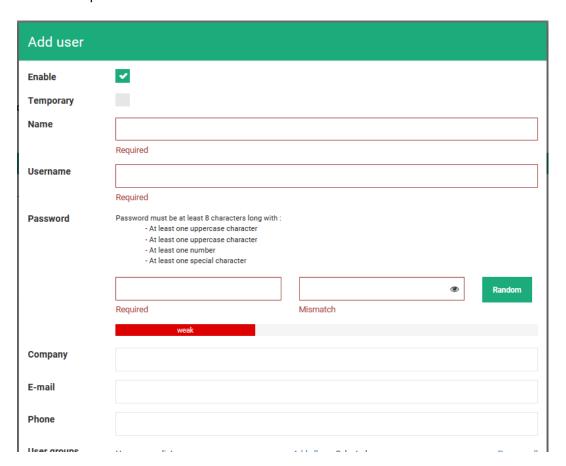
This paragraph describes the steps to add a user.

#### 4.1 Create a user

In the page Users click on the button add located on the Users frame



A user creation form opens.



Fill in at least the mandatory fields.

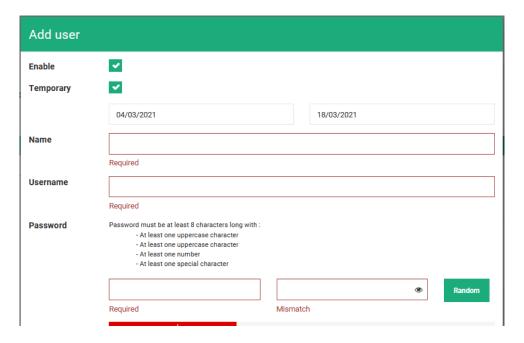
## **ROUTER CONFIGURATION**

**Note:** The complexity of the required passwords depends on the password strategy defined in the RFM (see <u>Password policy definition</u>)

## 4.2 Create a temporary user

The RFM gives the possibility to create a temporary user. This user will be activated on the RAS on the user's start date of validity and then deactivated on the end of validity date.

To create a temporary user, click on the **Add** button in the Users frame, then in the user creation form select the **Temporary** box.

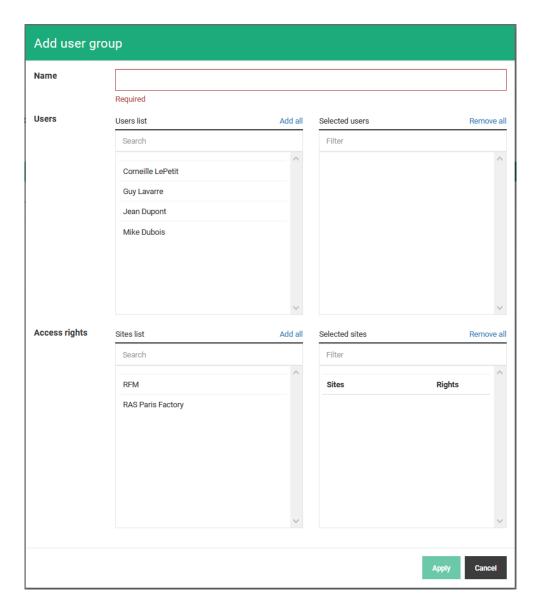


Then choose a Start validity date and an End validity date.

#### 4.3 Create a user group

To simplify the configuration of access rights, it is possible to create groups of users. A user group is a set of users with the same rights to access the fleet.

To create a user group, on the Users page, click the Add button in the User groups frame.

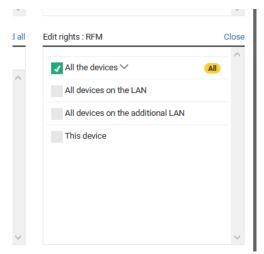


Pick a name.

To add a user to the group, in the **Users list** frame click on the user to add. It then appears on the right in the list of **Selected Users**.

To add an access right, choose the sites that the group will be able to access in the **List of sites**. They will then appear under the **Selected Sites**.

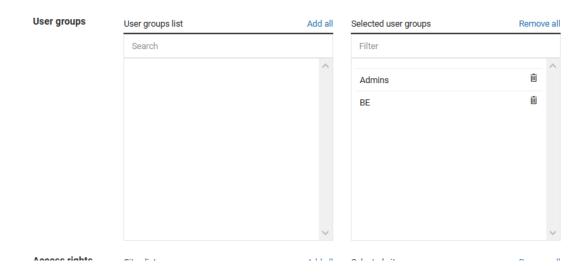
You can then select the rights more finely by clicking on the pencil to the right of the site name.



By default, a user has access to all the devices located in the LAN of the remote RAS.

## 4.4 Assign the user to a group

To add a user to a group, in the user creation form, select the user or groups to which this user must belong by clicking on the group name. The selected groups will then appear in the **Selected User Groups** frame.

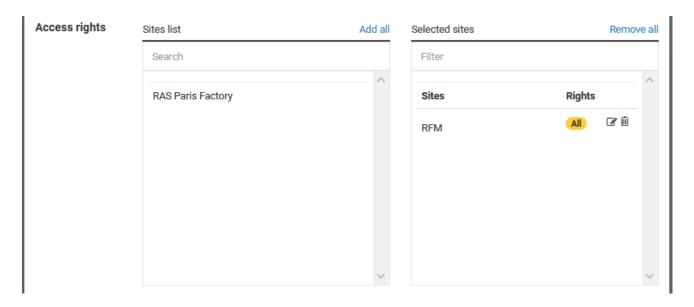


## 4.5 Give specific access rights to the user

There are two ways to give access rights to a user:

- Assign the user to one or more groups. In this case, he will inherit all the access rights of the group (s) (see <u>Creating a user group</u>)
- Assign specific rights to a user in the user creation form.

To add an access right, choose the sites that the user will be able to access in the List of sites. They will then appear under the **Selected Sites**.



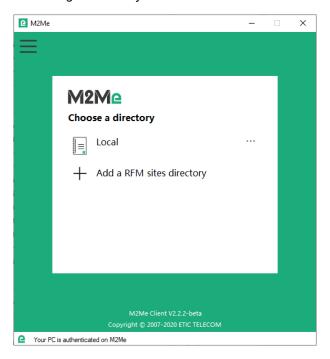
You can then select the rights more finely by clicking on the pencil to the right of the site name.



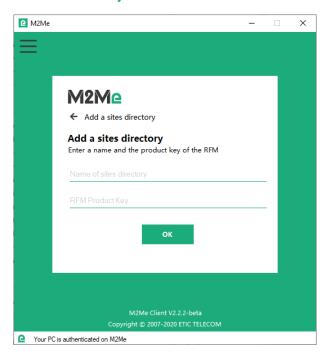
By default, a user has access to all the devices located in the LAN of the remote RAS.

# 5 M2Me client configuration

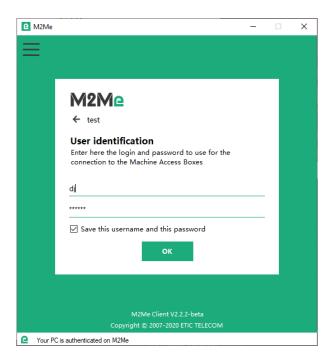
From version 2.2, the M2Me client integrates the synchronization of the site book with the RFM.



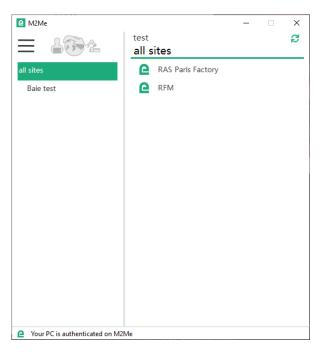
On the home page click on Add a sites directory.



Enter a name for the directory and enter the RFM product key (menu Home > About).



Fill in the identifiers of one of the users entered in the RFM.



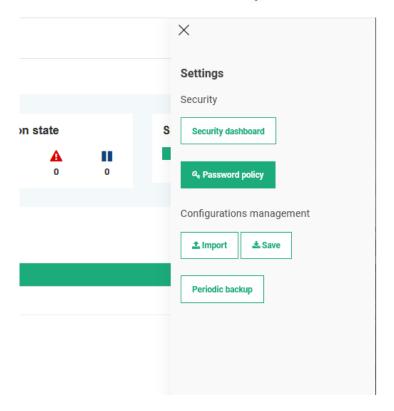
Your sites directory is synchronized with the RFM. Only sites and groups of sites that your user has permission to connect to are displayed.

If the user's password has expired (see <u>Password policy definition</u>) the M2Me client informs you and allows you to change it.

## 6 Password policy definition

For optimal security in a remote access system, it is recommended that passwords be chosen directly by end users. Under these conditions, it is necessary to be able to force the user to choose a strong password. To do this, you can define in the RFM a global password policy for your RAS fleet.

The password policy is configured from the settings (symbol 🔅 top right).



## 6.1 Add password complexity constraints

Enforce complex passwords:

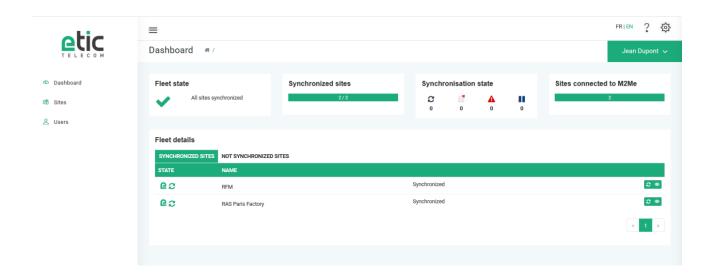
- Minimum number of characters
- Must have at least one lowercase character
- Must have at least one uppercase character
- Must have at least one number
- Must have at least one special character

## 6.2 Add password renewal constraints

- Allow renewal by users
- Force the renewal of the password at the first connection
- Set a password validity
- Minimum password age before renewal request (in days)
- Maximum age of the password before deactivation (in days)

# Check the state of the fleet

Click on the menu and select **Dashboard**.

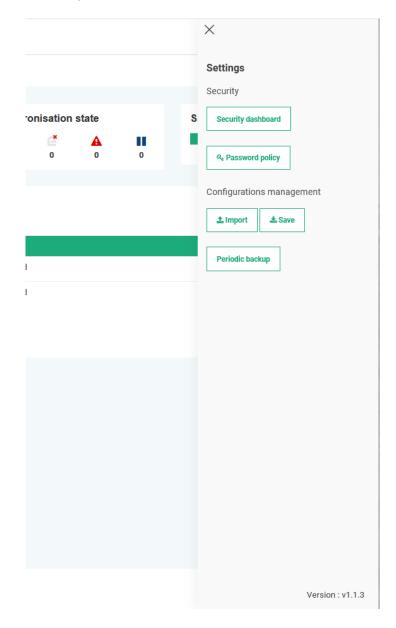


The overall state of the fleet is summarized on this page.

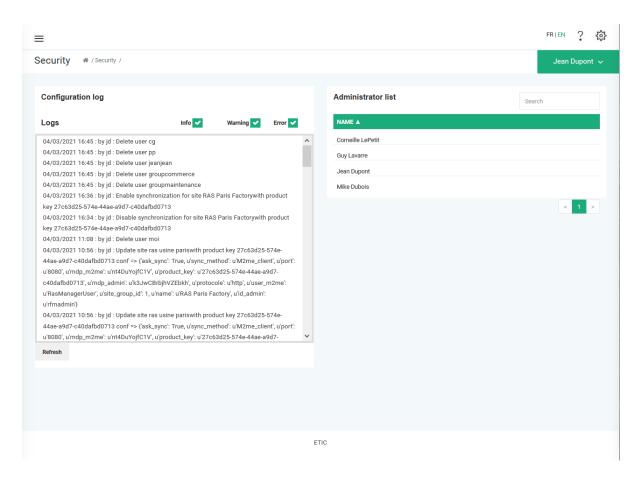
# 8 Trace fleet modifications

All changes made in the fleet configuration interface are tracked in a log. Each modification is recorded there as well as the user who made the modification. Thus, it is possible to trace each modification carried out on the fleet.

Click on the gear located on the right of the menu bar.



Click on the Security dashboard button.

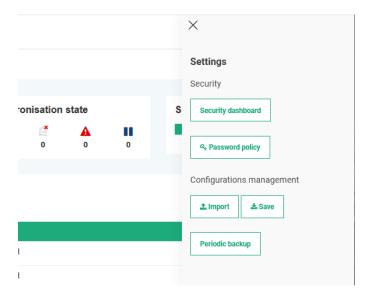


The **Configuration log** stores all the modification done to the fleet configuration.

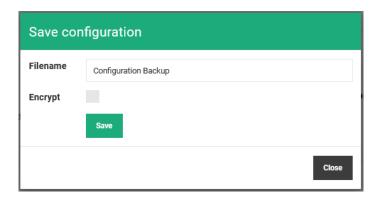
# 9 Configuration management

## 9.1 Backup / restore

Click on the gear located on the right of the menu bar.

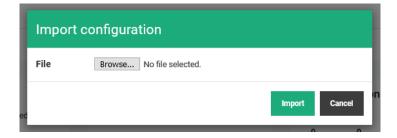


In the Configurations management section, click on Save.



Choose a file name and click save. The download of the configuration file begins.

To restore the configuration, click Import, click Browse and choose your configuration file, then click Import.

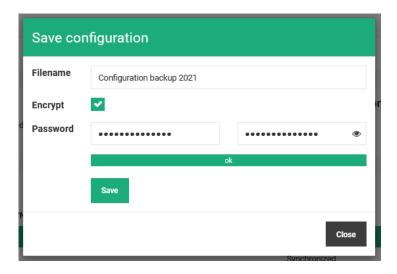


Your configuration is immediately loaded on the RFM.

## 9.2 Encryption of configuration files

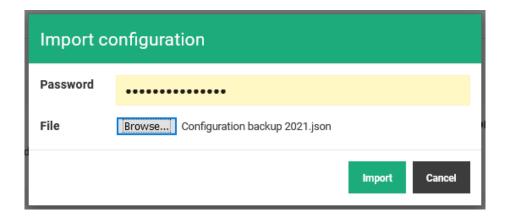
The configuration file contains the secrets for connecting to your RAS fleet; it is therefore sensitive. To store the configuration file securely, it is possible to encrypt the configuration file with a password when it is exported from the RFM.

In the Configurations management section, click on Save.



Check the **Encrypt** box and enter a configuration encryption password. You will be asked for this password when importing a configuration into the RFM.

To restore an encrypted configuration, click **Import**, click **Browse** and choose your configuration file. A **Password** field appears. Enter the password chosen during the backup and click on **import**.



Configuration is immediately loaded into the RFM.

## 9.3 Automatic backup

It is possible to save the RFM configuration daily on the SD card. When this option is enabled, the RFM performs a daily backup of the configuration on the SD card. Files are kept for 1 year.

In the Configurations management section, click on Periodic backup.



Check the box **Activate periodic backup** to enable this feature.



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