ACKSYS APNUS043 WaveManager Wireless Network Management User Guide

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Contents

Introduction

The Acksys WaveManager On-Premise is a comprehensive wireless network management tool designed specifically for industrial and transportation environments. This software solution enables real-time monitoring, configuration, and optimization of wireless devices, ensuring seamless communication and reliability in mission-critical applications.

The purpose of the On-Premise release is to be used on a local network with WaveOs MQTT devices.

The **On-Premise Release** is designed to operate within a local network, specifically for use with WaveOS MQTT devices.

This version leverages a licensing system, which must be activated to unlock the advanced features of the RMS. This application note serves as a comprehensive guide for installing WaveManager On-Premise on various platforms, including Microsoft Windows and Linux Ubuntu.

Prerequisites

Before starting the installation, ensure the following are in place:

Hardware Requirements:

- **Processor:** Minimum quad-core CPU (e.g., Intel Xeon, AMD Ryzen).
- **Memory:** At least 16 GB RAM (32 GB recommended for large deployments).
- **Storage:** Minimum 100 GB of free disk space.
- **Network:** Static IP address for the WaveManager server.

Software Requirements:

For Server :

- **Operating System:**
  - Ubuntu Server 24.04 or 24.04 LTS (recommended)
  - Windows 10, Windows Server 2019.
- **DataBase:**
  - In case of using an external Database
- PostgreSQL 15+ DataBase (Recommended).
- MSSQL Database

For Product:

- **Operating System:**
  - WaveOs 4.28.1.1 or greater

Download WaveManager Installer

Visit the WaveManager official portal and download the appropriate on-premise installation package:

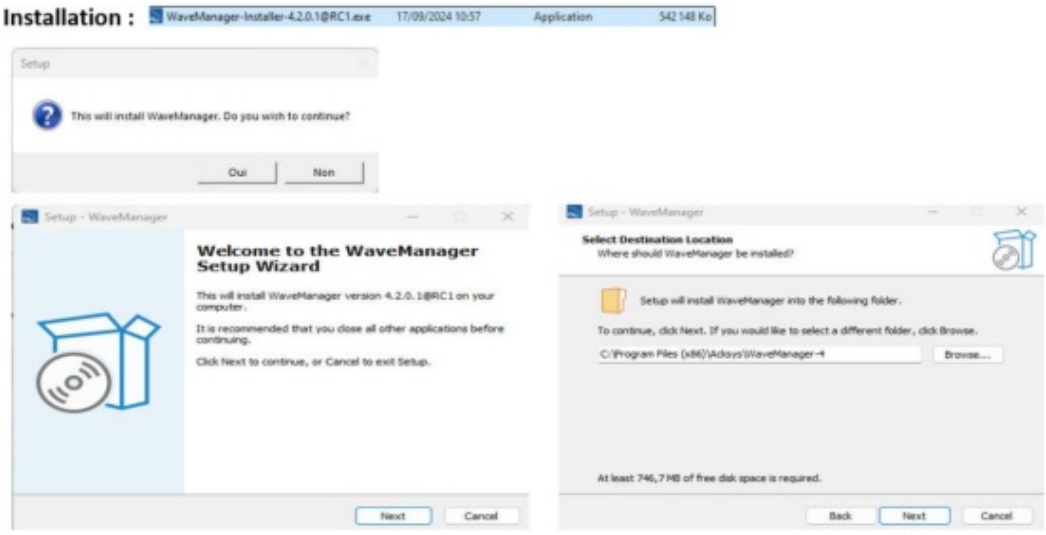
- **For Linux:** .deb file.
- **For Windows:** .exe file.

Installation Step

Let saying finally, the downloading part of our WaveManager installation process is done.

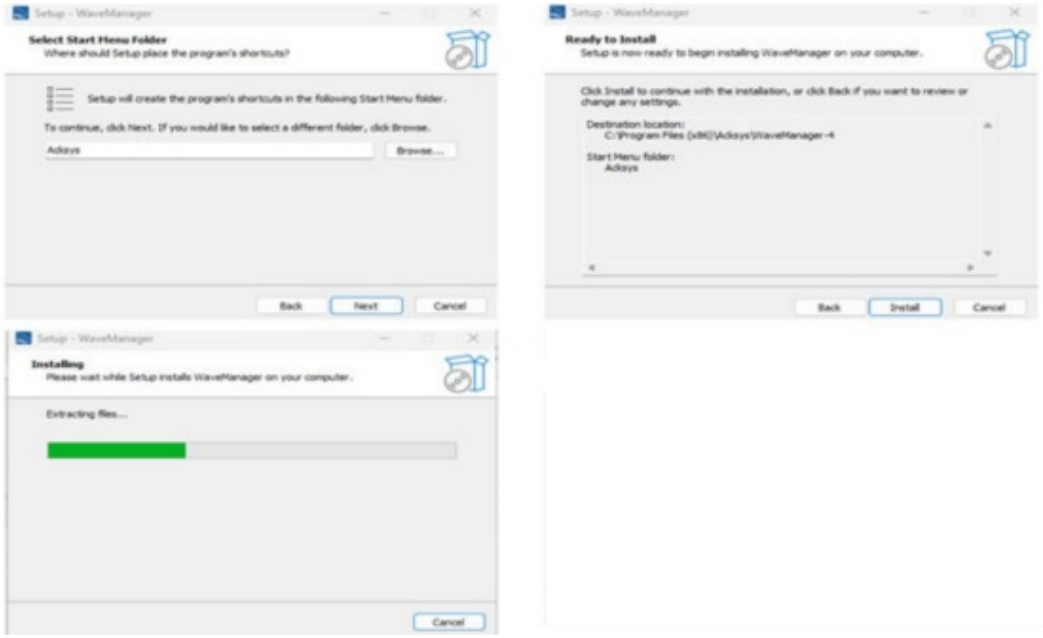
For Windows Server

So, we can now begin WaveManager installation from the setup Wizard. Click next to continue.



NOTE: If you have already installed another WaveManager instance, please we recommended you to close all other applications before continuing.

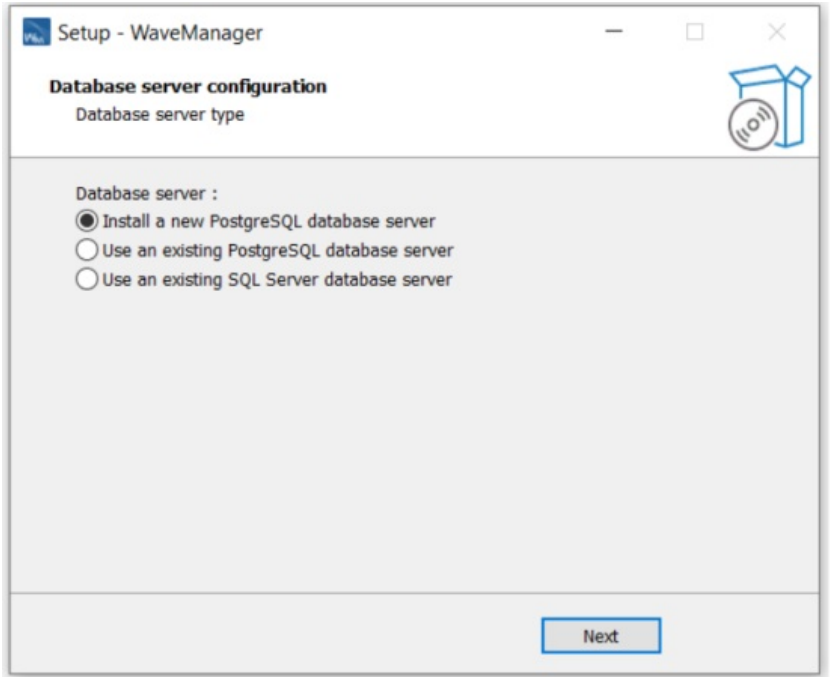
As a result of everything we have done, you will find the install process is going on just like the following image.



On the next step, you will choose the type of database you want to install in the provided option.

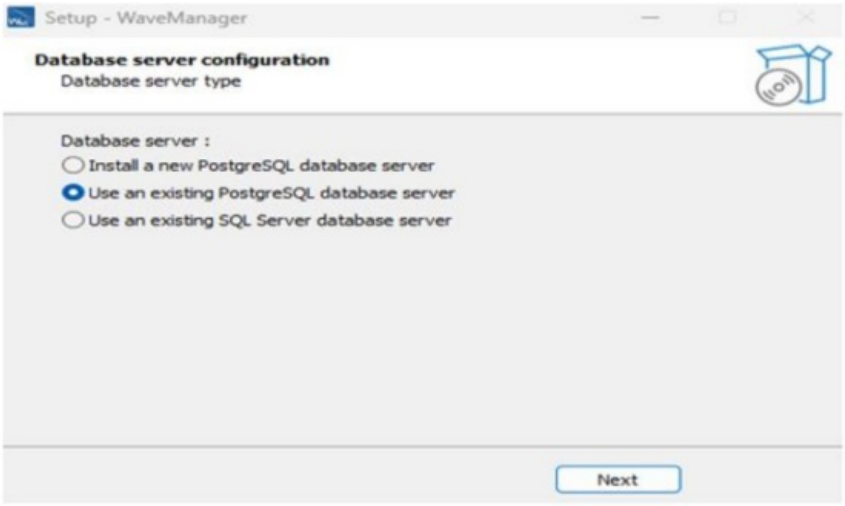
Local DataBase Installation

- **Description:** The database is installed on the same server or within the local network of the partner



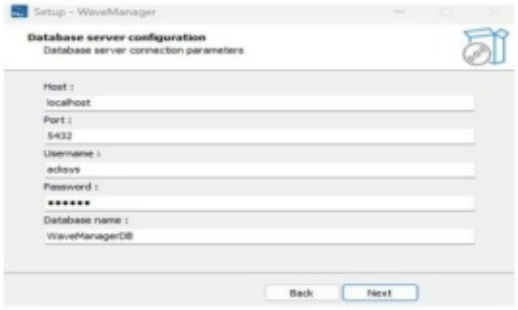
External DataBase Installation

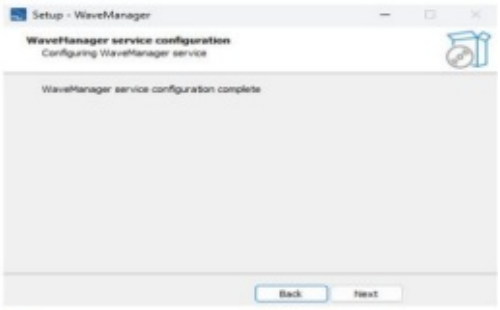
- **Description:** The database can be hosted on a remote server or an external database server managed by a third party PostgreSQL or MSsql).

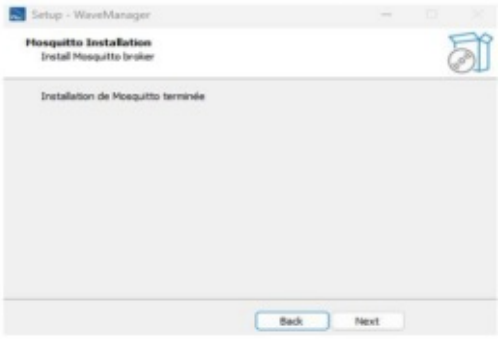


NOTE: Both options are viable, and the choice depends on the partner's specific needs, budget, and IT policies. It is crucial to perform a requirements analysis and collaborate closely with the partner to decide on the best deployment approach.

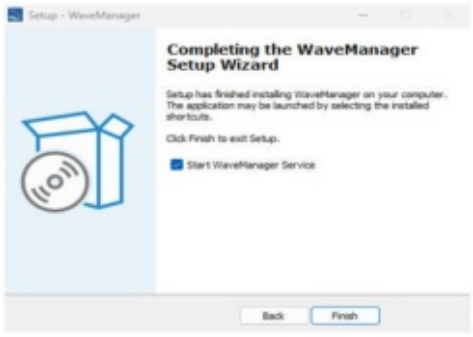
Click on the type of database install , You will find a form to fill up the database information. Enter the Database name, username, password and the IP address of your database server in the form. For this example, the correct database configuration should look like the following image.

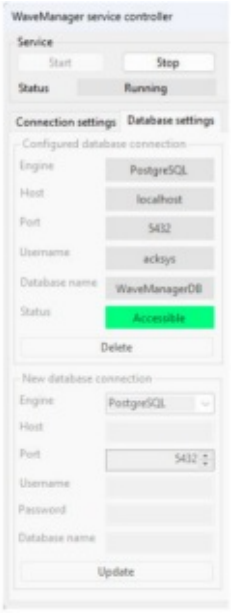






Do not forget to replace the database name, username, password, and Database host (The IP address of your database server) in the form. Once the information is entered correctly, press the Next button to submit the form.





If the database information is not correct, you can edit the database fields in the following form:

“Please update the WaveManager database with the relevant information after completing the necessary actions. Ensure that all fields are populated accurately and double-check for consistency to avoid discrepancies.”

Finally, After entering all the required information in the form, Click on the Update button to install the WaveManager database.

Congratulations! You have successfully configured WaveManager with the external database.. All the database queries will be executed on our database server.

For Linux Server

Update the System
sudo apt update && sudo apt upgrade -y

Install WaveManager Packet

After downloading the Linux WaveManager packet acksys-wavemanager_4.2.0.1RC2_amd64.deb, type the following command to install the packet:
Sudo apt-get install -f ./acksys-wavemanager_4.2.0.1RC2_amd64.deb

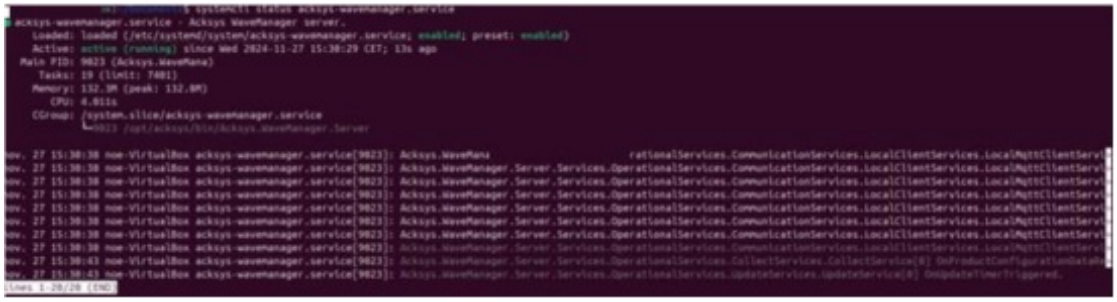
Installation OverView

Please note that during the installation process, you are invited to set the Database password.

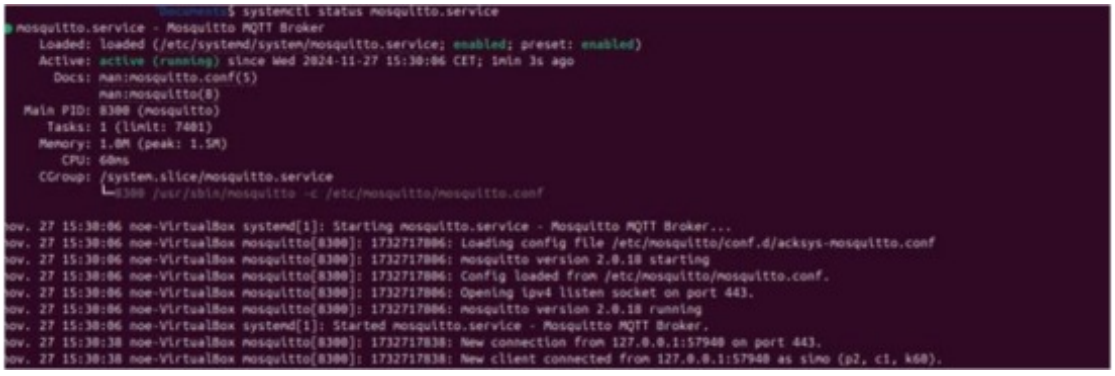
```
                :~/Documents$ sudo apt-get install -f ./acksys-wavemanager_4.2.0.1RC2_and64.deb
Lecture des listes de paquets... Fait
Construction de l'arbre des dépendances... Fait
Lecture des informations d'état... Fait
Note : sélection de « acksys-wavemanager » au lieu de « ./acksys-wavemanager_4.2.0.1RC2_and64.deb »
Les paquets supplémentaires suivants seront installés :
  libcjson1 libdlt2 libmosquitto1 libwebsockets19t64 mosquitto postgresql
Paquets suggérés :
  postgresql-doc
Les NOUVEAUX paquets suivants seront installés :
  acksys-wavemanager libcjson1 libdlt2 libmosquitto1 libwebsockets19t64 mosquitto postgresql
0 mis à jour, 7 nouvellement installés, 0 à enlever et 50 non mis à jour.
Il est nécessaire de prendre 627 ko/59,4 Mo dans les archives.
Après cette opération, 201 Mo d'espace disque supplémentaires seront utilisés.
Souhaitez-vous continuer ? [O/n] o
Réception de :1 http://archive.ubuntu.com/ubuntu noble/universe amd64 libcjson1 amd64 1.7.17-1 [24,8 kB]
Réception de :2 http://archive.ubuntu.com/ubuntu noble/universe amd64 libmosquitto1 amd64 2.0.18-1build3 [54,1 kB]
Réception de :3 http://archive.ubuntu.com/ubuntu noble/universe amd64 libdlt2 amd64 2.18.10-10 [65,4 kB]
Réception de :4 http://archive.ubuntu.com/ubuntu noble/universe amd64 libwebsockets19t64 amd64 4.3.3-1.1build3 [229 kB]
Réception de :5 http://archive.ubuntu.com/ubuntu noble/universe amd64 mosquitto amd64 2.0.18-1build3 [242 kB]
Réception de :6 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 postgresql all 16+257build1.1 [11,6 kB]
Réception de :7 /home/noe/Documents/acksys-wavemanager_4.2.0.1RC2_and64.deb acksys-wavemanager amd64 4.2.0.1RC2 [58,8 MB]
627 ko réceptionnés en 0s (1 319 ko/s)
Sélection du paquet libcjson1:and64 précédemment désélectionné.
(Lecture de la base de données... 153189 fichiers et répertoires déjà installés.)
Préparation du dépaquetage de .../0-libcjson1_1.7.17-1_and64.deb ...
Dépaquetage de libcjson1:and64 (1.7.17-1) ...
Sélection du paquet libmosquitto1:and64 précédemment désélectionné.
Préparation du dépaquetage de .../1-libmosquitto1_2.0.18-1build3_and64.deb ...
Dépaquetage de libmosquitto1:and64 (2.0.18-1build3) ...
Sélection du paquet libdlt2:and64 précédemment désélectionné.
Préparation du dépaquetage de .../2-libdlt2_2.18.10-10_and64.deb ...
Dépaquetage de libdlt2:and64 (2.18.10-10) ...
Sélection du paquet libwebsockets19t64:and64 précédemment désélectionné.
Préparation du dépaquetage de .../3-libwebsockets19t64_4.3.3-1.1build3_and64.deb ...
Dépaquetage de libwebsockets19t64:and64 (4.3.3-1.1build3) ...
Sélection du paquet mosquitto précédemment désélectionné.
Préparation du dépaquetage de .../4-mosquitto_2.0.18-1build3_and64.deb ...
```

```
Dépaquetage de libcjson1:and64 (1.7.17-1) ...
Sélection du paquet libmosquitto1:and64 précédemment désélectionné.
Préparation du dépaquetage de .../1-libmosquitto1_2.0.18-1build3_and64.deb ...
Dépaquetage de libmosquitto1:and64 (2.0.18-1build3) ...
Sélection du paquet libdlt2:and64 précédemment désélectionné.
Préparation du dépaquetage de .../2-libdlt2_2.18.10-10_and64.deb ...
Dépaquetage de libdlt2:and64 (2.18.10-10) ...
Sélection du paquet libwebsockets19t64:and64 précédemment désélectionné.
Préparation du dépaquetage de .../3-libwebsockets19t64_4.3.3-1.1build3_and64.deb ...
Dépaquetage de libwebsockets19t64:and64 (4.3.3-1.1build3) ...
Sélection du paquet mosquitto précédemment désélectionné.
Préparation du dépaquetage de .../4-mosquitto_2.0.18-1build3_and64.deb ...
Dépaquetage de mosquitto (2.0.18-1build3) ...
Sélection du paquet postgresql précédemment désélectionné.
Préparation du dépaquetage de .../5-postgresql_16+257build1.1_all.deb ...
Dépaquetage de postgresql (16+257build1.1) ...
Sélection du paquet acksys-wavemanager précédemment désélectionné.
Préparation du dépaquetage de .../6-acksys-wavemanager_4.2.0.1RC2_and64.deb ...
Dépaquetage de acksys-wavemanager (4.2.0.1RC2) ...
Paramétrage de libmosquitto1:and64 (2.0.18-1build3) ...
Paramétrage de libcjson1:and64 (1.7.17-1) ...
Paramétrage de libwebsockets19t64:and64 (4.3.3-1.1build3) ...
Paramétrage de libdlt2:and64 (2.18.10-10) ...
Paramétrage de postgresql (16+257build1.1) ...
Paramétrage de mosquitto (2.0.18-1build3) ...
Could not execute systemctl:  at /usr/bin/deb-systemd-invoke line 148.
Paramétrage de acksys-wavemanager (4.2.0.1RC2) ...
Changing ownership of directories...
Configuration de la connexion au serveur de base de données...
Enter the postgres administration password : this will be used to connect to the PostgreSQL server
Password:
Configuring PostgreSQL Server...
ALTER ROLE
Configuring UFW to allow traffic on port 5432...
Omission de l'ajout de la règle existante
Omission de l'ajout de la règle existante (v6)
Pare-feu inactif (rechargement ignoré)
Restarting PostgreSQL Server...
Configuration de Mosquitto...
Création des répertoires nécessaires...
Paramétrage de libcjson1:and64 (1.7.17-1) ...
Paramétrage de libwebsockets19t64:and64 (4.3.3-1.1build3) ...
Paramétrage de libdlt2:and64 (2.18.10-10) ...
Paramétrage de postgresql (16+257build1.1) ...
Paramétrage de mosquitto (2.0.18-1build3) ...
Could not execute systemctl:  at /usr/bin/deb-systemd-invoke line 148.
Paramétrage de acksys-wavemanager (4.2.0.1RC2) ...
Changing ownership of directories...
Configuration de la connexion au serveur de base de données...
Enter the postgres administration password : this will be used to connect to the PostgreSQL server
Password:
Configuring PostgreSQL Server...
ALTER ROLE
Configuring UFW to allow traffic on port 5432...
Omission de l'ajout de la règle existante
Omission de l'ajout de la règle existante (v6)
Pare-feu inactif (rechargement ignoré)
Restarting PostgreSQL Server...
Configuration de Mosquitto...
Création des répertoires nécessaires...
Création du fichier de configuration principal de Mosquitto...
Fichier de configuration principal créé et permissions définies sur 644.
Création du fichier de configuration Mosquitto...
Fichier de configuration créé et permissions définies sur 755.
Création du fichier de service Mosquitto...
Fichier de service créé et permissions définies sur 644.
Redémarrage du service Mosquitto...
```

PostgreSQL Database service Status (once installed)

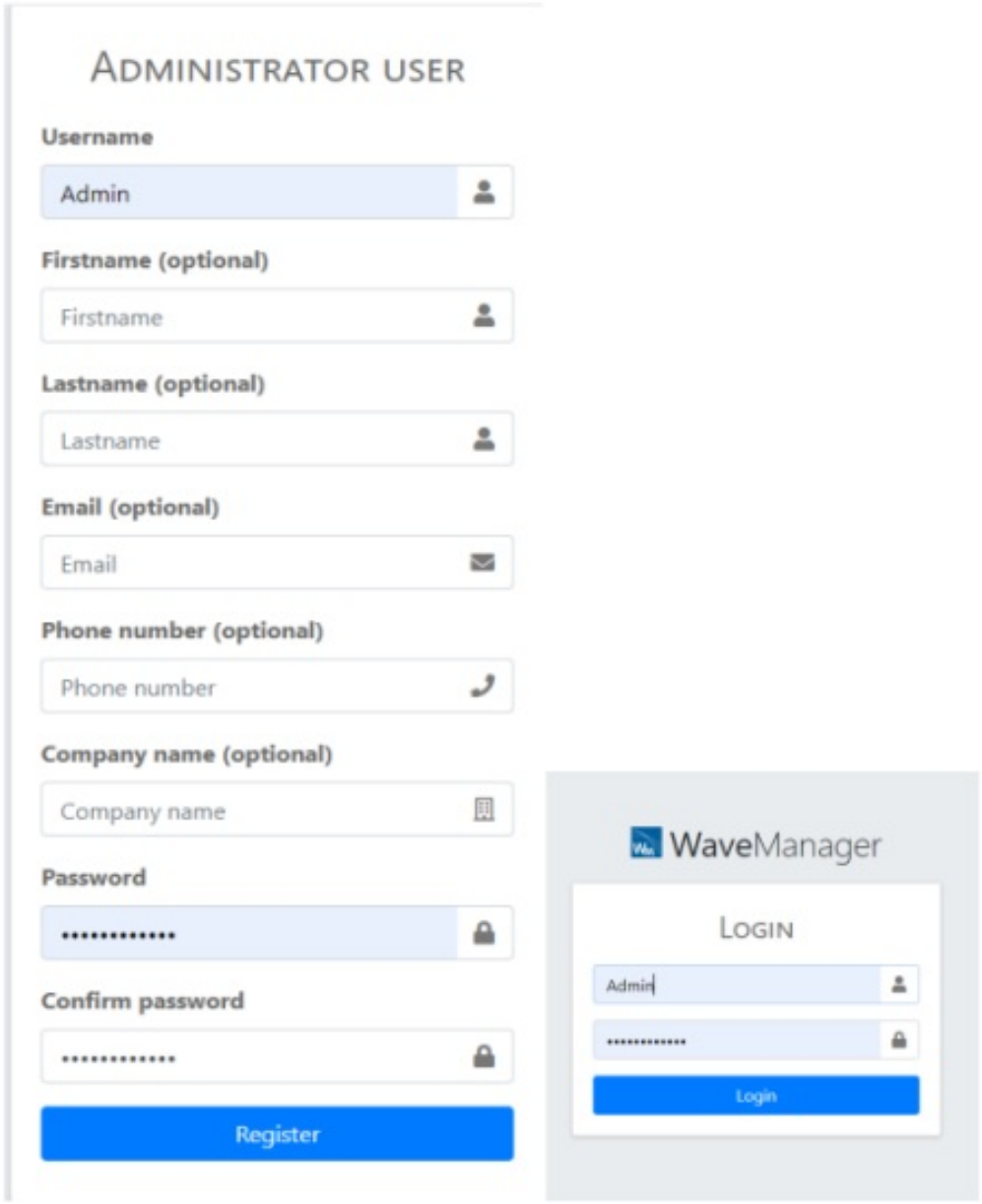


Mosquitto Service Status (once installed)



Configure your Admin account (First Login)

Open a browser and navigate to http://.<server-ip>:5000 or the domain configured and you will be invited to fill the login form and configure your admin account.



Quick test to check our new install

Please configure an Acksys router to interact with the MQTT broker (WaveManager MQTT broker), you need to set up the router to act as an MQTT client. ACKSYS router support direct MQTT client functionality on the firmware version 4.28.1.1 or higher.

Configure your router to connect to the broker

Access the Web UI:

- Log in to the router's web interface.
- Navigate to Setup > Services > Cloud > and provide necessary information to configure the router .

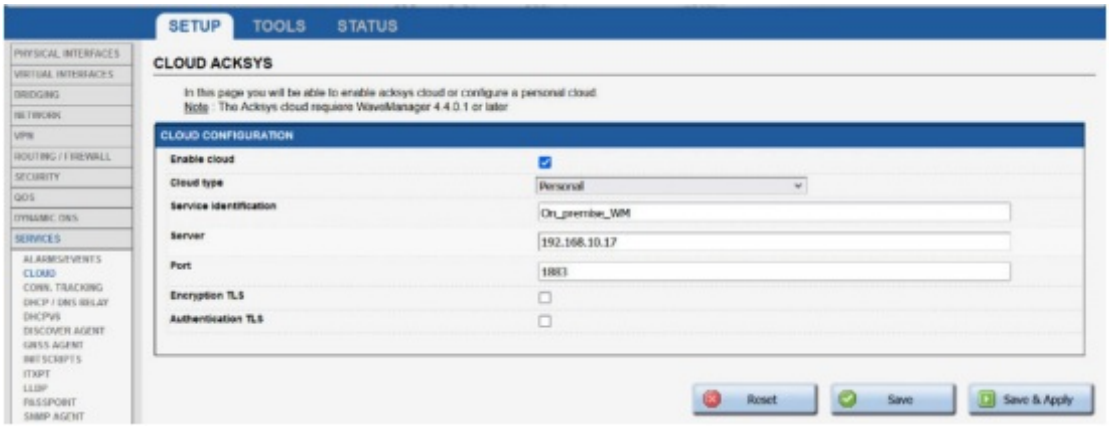
Set Up MQTT Connection:

- **Enter the Broker's details:**
  - **Enable cloud :** enable MQTT service
  - **Cloud type :** Personal

- **Service identification :** Management purposes, this field is mandatory. Provided by the web interface when cloud is personal.
- **Server:** The broker's IP or hostname (here WaveManager IP Address).
- **Port:** The MQTT port.
- **Encryption TLS :** If required by the broker.
- **Authentication TLS:** If required by the broker.

Apply and Save Configuration:

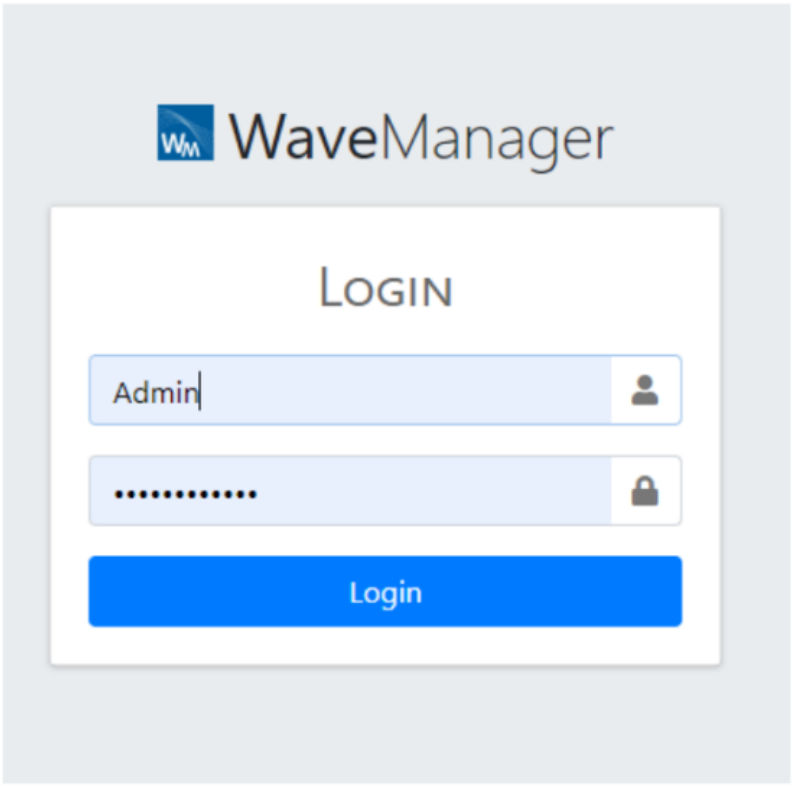
- Ensure the MQTT service is enabled.
- Save and apply the configuration.

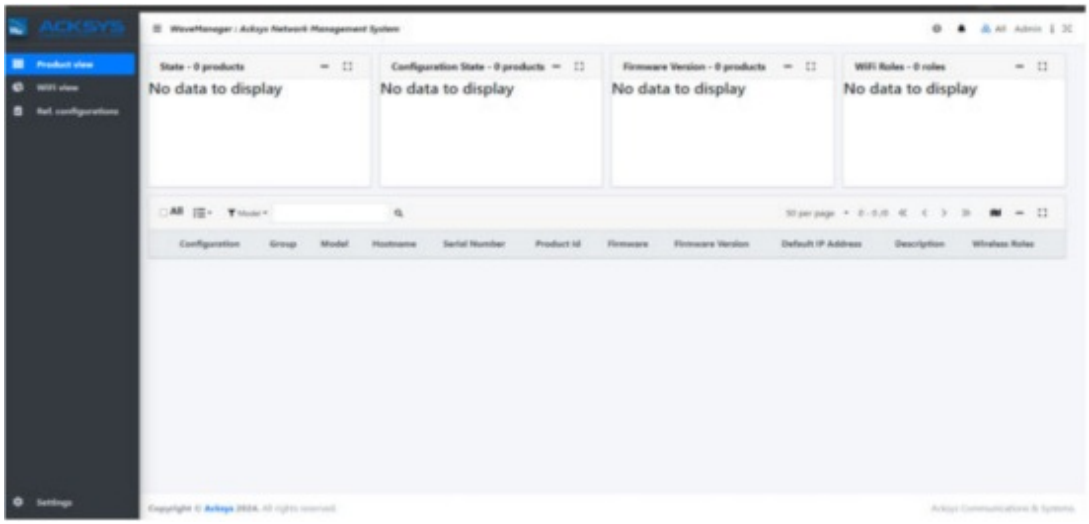


Field name	Sample	Description
Enable	Checked	Enable MQTT service
Cloud Type	personal	Personal Cloud
Service identification	On_Premise_WM	This field is mandatory. Provided by the web interface when cloud is personal.
Server	192.168.10.17	Remote Broker's address à Wave Manager On-Premise
Port	By default :1883	Select which port the broker should use to listen for connections
Encryption TLS	Unchecked	Enable TLS/SSL authentication for the broker
Authentication TLS	Unchecked	Enable TLS/SSL authentication for the broker

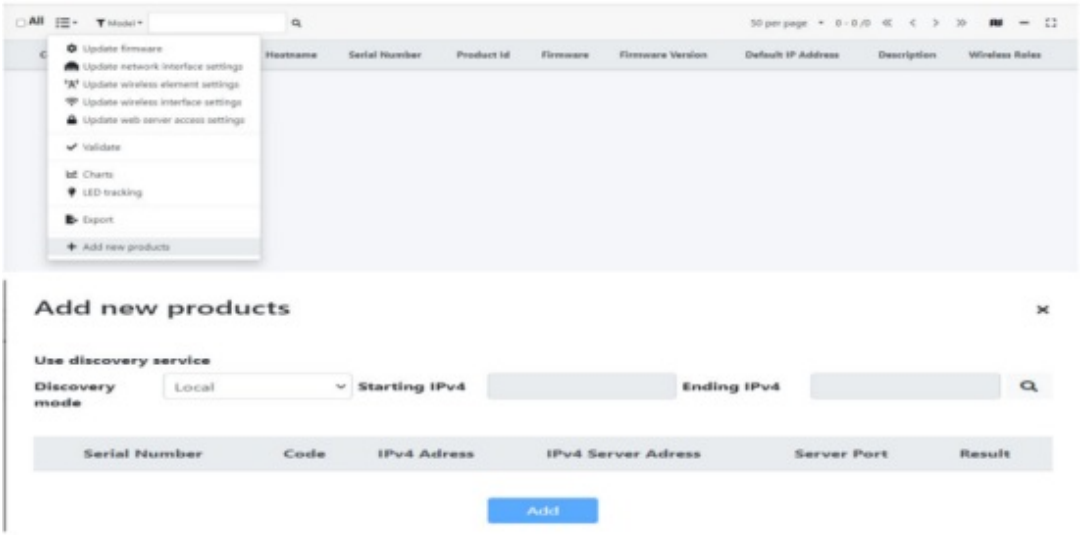
Connect on the WaveManager On-Premise

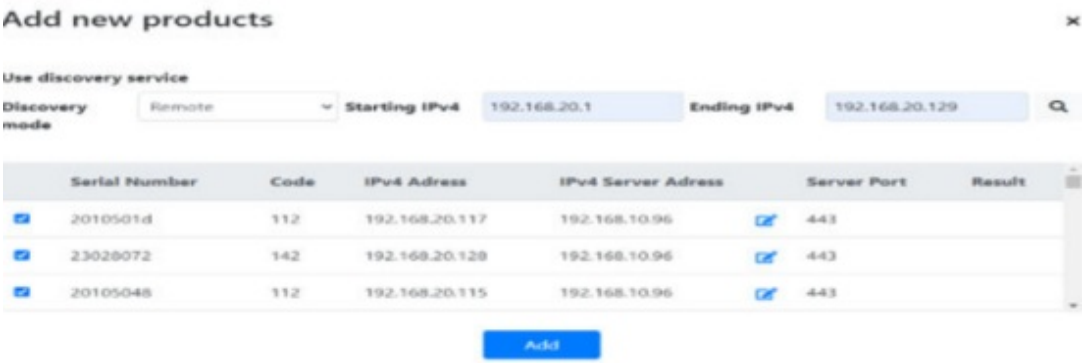
Access WaveManager:
Open a browser and navigate to http://<server-ip>:5000 or the domain configured and you will be invited to fill login/password.



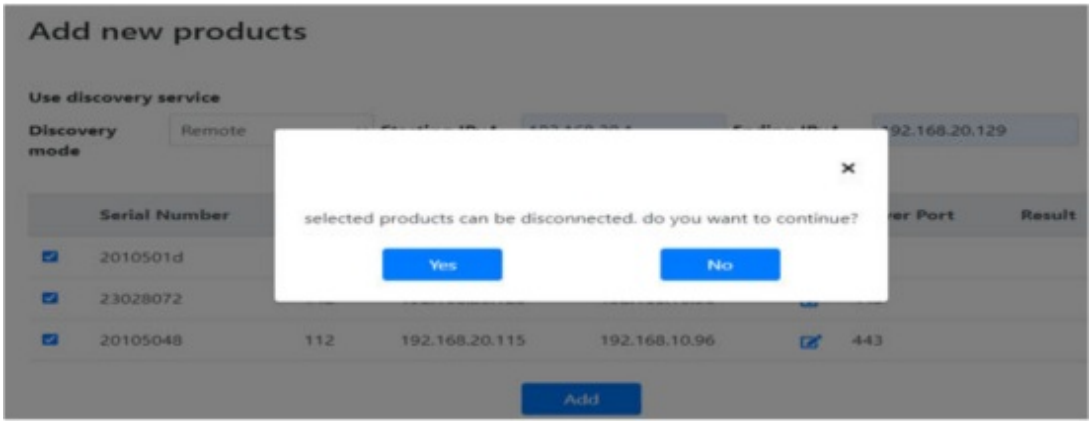


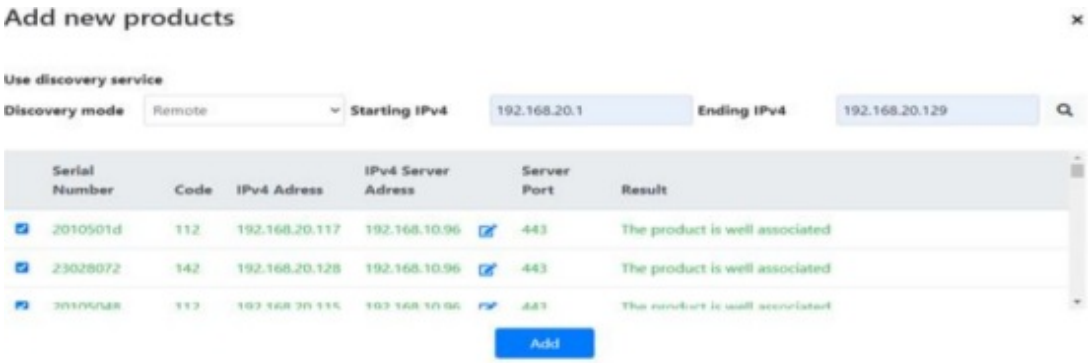
Add new products:

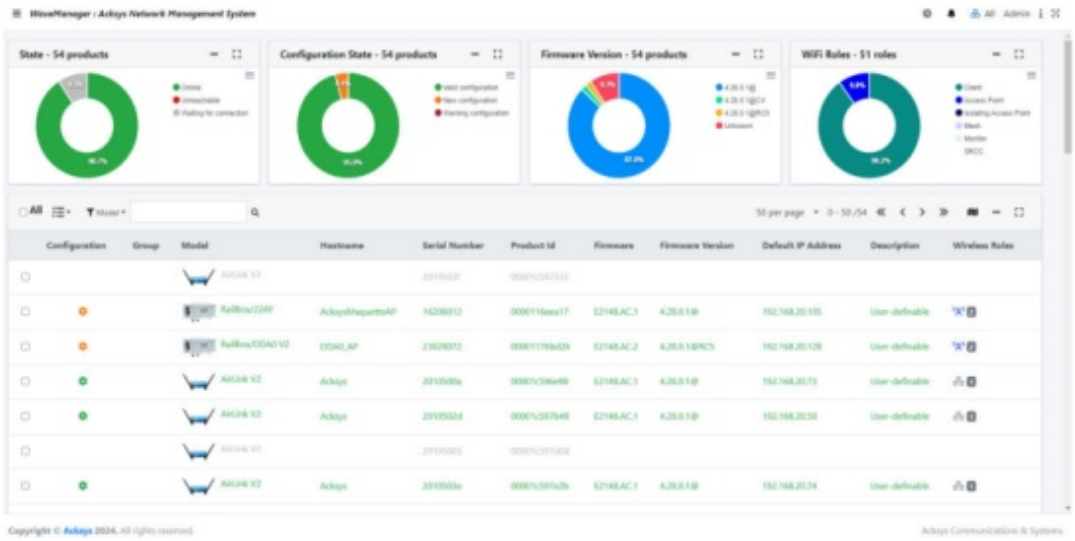




Products Association:



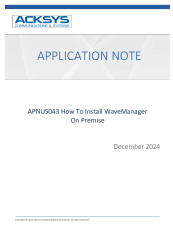




For further assistance, consult the official WaveManager documentation or contact support.
Support : https://support.acksys.fr.

ACKSYS COMMUNICATIONS & SYSTEMS

Documents / Resources

	[ACKSYS APNUS043 WaveManager Wireless Network Management](#) [pdf] User Guide APNUS043, APNUS043 WaveManager Wireless Network Management, WaveManager Wireless Network Management, Wireless Network Management, Network Management

References

- Acksys Communications & Systems
- Acksys Communications & Systems
- User Manual

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